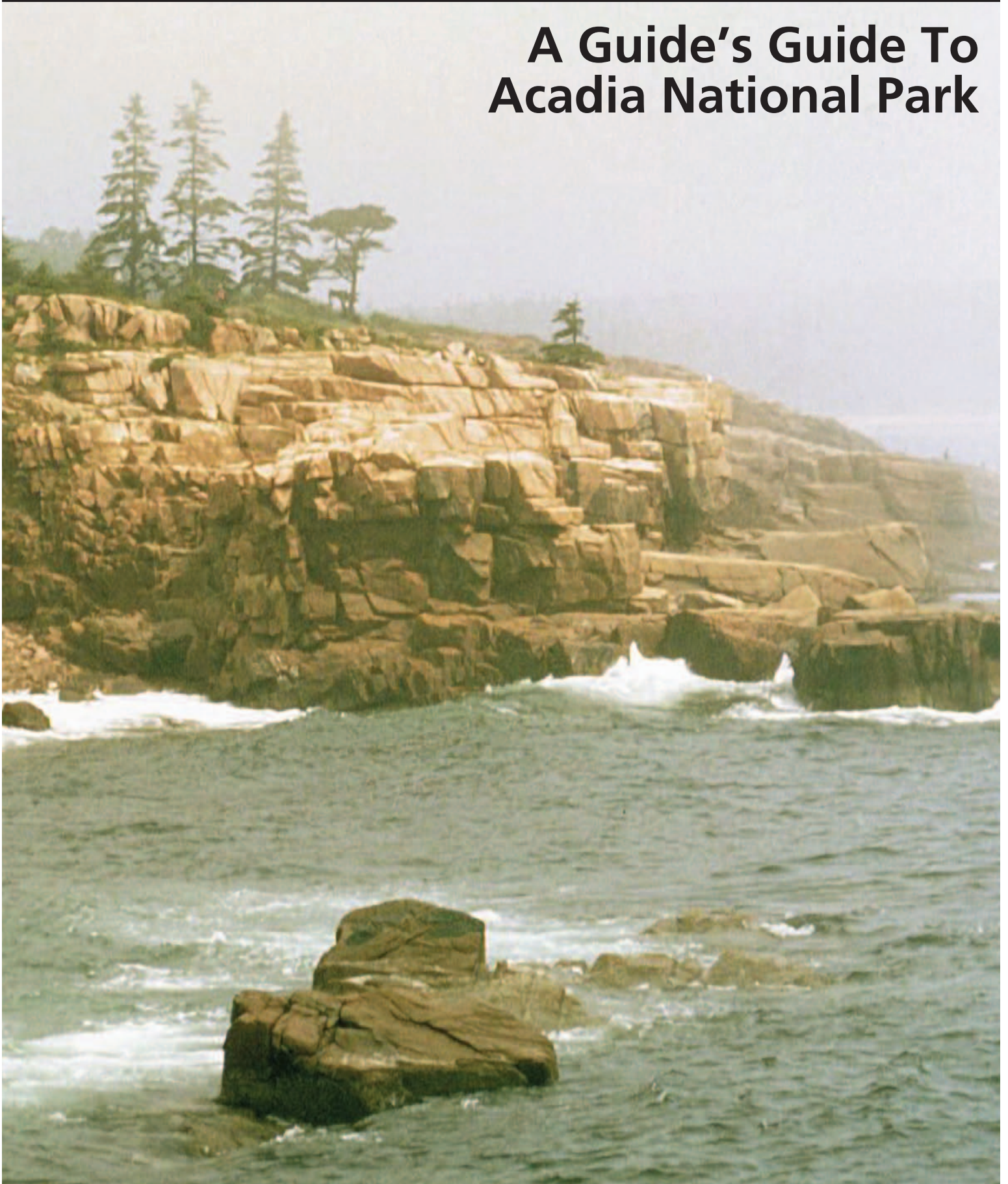


Acadia

National Park Service
U.S. Department of the Interior



A Guide's Guide To Acadia National Park



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Acknowledgements

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FOREWORD

Welcome to Acadia National Park A Letter from the Park Superintendent

Dear Guide User,

You are an important partner of the National Park Service. The *Guide's Guide* helps meet the standards set forth in the Commercial Services Plan by providing you with a better understanding of Acadia's resources, significance, and need for low impact visits. Some visitors discover Acadia on their own, while others do so with an organized group—either private or commercial. Because of the large number of commercial users in and around Acadia, park managers request that commercial activities contribute to the sustainability of park resources, enhance educational opportunities, and offer quality interpretation. The Commercial Services Plan, available on our website (www.nps.gov/acad, under “Commercial Business Permits”), outlines many other objectives and requirements for commercial users.

Whether you are a bus tour guide searching for more specific information, a supervisor training staff to work with visitors, or a business owner needing park information to answer customer questions, the *Guide's Guide* will provide you with the tools to:

- Impart to visitors the primary purpose of Acadia National Park.
- Understand some of the unique natural and historical aspects of Acadia.
- Deliver accurate information to improve interpretation to visitors using commercial services.
- Magnify the impact of park conservation messages.
- Apply *Leave No Trace* principles in each park area.

Please familiarize yourself with Chapter One before beginning the rest of the *Guide's Guide*. We hope this material will be part of an effective trip to Acadia National Park. Whatever your intent—exploring habitats of ecological importance, reflecting on historical events of both local and national value, or simply enjoying the exceptional opportunities for inspiration and recreation—your efforts to further the park's mission with your group assure the continued protection of Acadia as a national treasure. Thank you for your cooperation. Enjoy the park!

Sincerely,

A handwritten signature in black ink, reading "Sheridan Steele". The signature is written in a cursive, flowing style.

Sheridan Steele
Park Superintendent



SECTION ONE — BEGINNING YOUR VISIT

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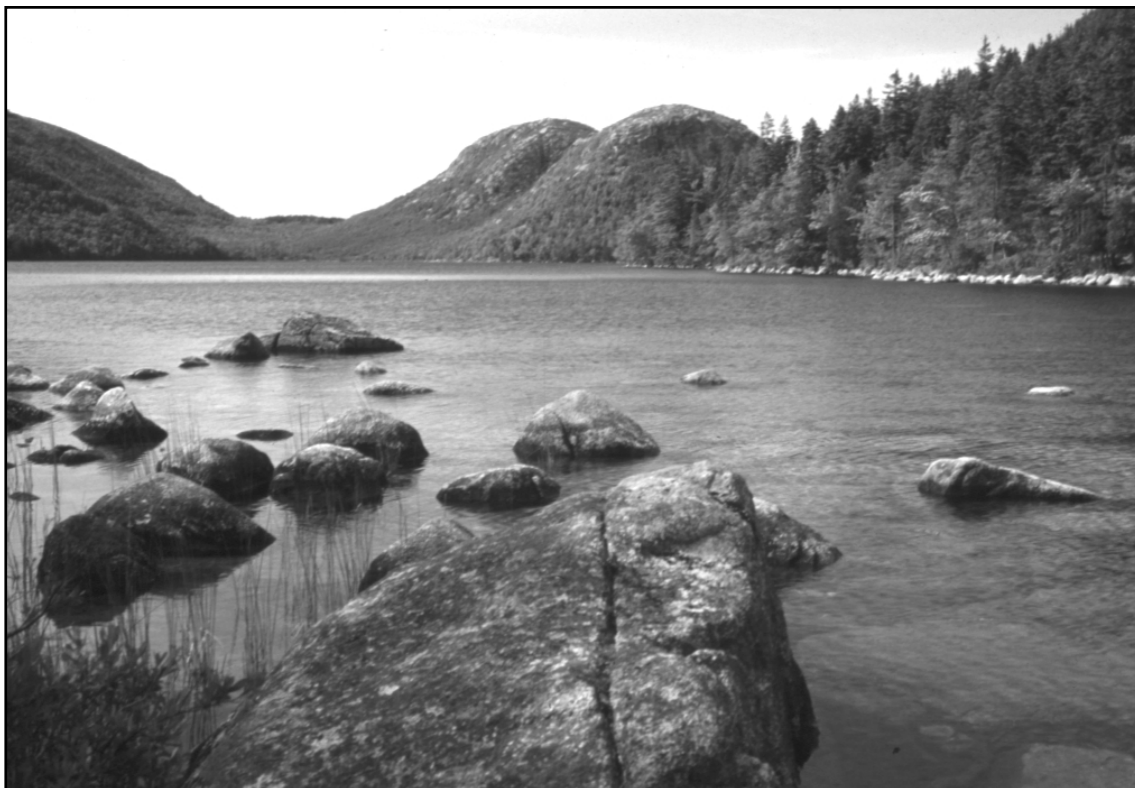
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SECTION ONE – BEGINNING YOUR VISIT

Chapter One – Introduction to Acadia and the Guide's Guide

Acadia National Park – A Park Like No Other
About this Guide





Acadia National Park – A Park Like No Other

“It is a true park area in the highest sense, totally different from any other that we have.”

“It is rich in historic association, in scientific interest, and in landscape beauty.”

“There is no other place along the Atlantic coast where so wide a range of geologic facts are shown or where such valuable material is offered for research.”

“It will give a healthy playground to multitudes of hard-working men and women.”

“With its adjacent inlets and headlands, it stands out as offering the greatest natural diversity.”

—*excerpts from letters to President Woodrow Wilson in support of the park's creation*

The above lines, written in the early 1900s in support of the creation of a national park on Mount Desert Island along the coast of Maine, are as applicable today as when they were first penned. The foresight of stewardship-minded individuals at the turn of the 19th century created this first national park east of the Mississippi in 1916. Private citizens, through their generous donations of land, gave this gift to the American people. Granite mountain tops, sparkling lakes, forested valleys, meadows, marshes, and rocky coastline weave together to create a national park like none other. Acadia's landscape holds human history as well, from American Indians and European explorers to a seafaring population and conservationists.

Acadia's resources are not found in oil or lumber, but in undisturbed natural systems for study, exceptional scenery for individual inspiration, protected habitat for plants and animals, and defining stories of people and the land. The National Park Service at Acadia is charged by federal law to protect and conserve Acadia's outstanding scenic and natural resources and cultural identity for present and future generations. Through this mission, preservation, education, scientific research, and recreation opportunities abound.

Acadia, like other national parks, offers opportunities to fulfill emotional and spiritual needs for renewal and to invoke attitudes of reverence and stewardship. Because of the deep affection held for Acadia, private citizens of both a century ago and today took the actions necessary to preserve these beautiful landscapes. As a national park, Acadia has continued the tradition of providing spiritual respite and encouraging responsible stewardship. Acadia's easy accessibility for all ages and all levels of ability make it possible for everyone to observe and be renewed by nature.

The flora and fauna of Acadia National Park and surrounding waters comprise a rich mix of species significant in their biodiversity.

Botanically, Acadia lies in a transition zone between the northern coniferous forests and the temperate deciduous woods. The co-mingling of species from two distinct regions creates unusual plant associations. Rare and endangered plant species find refuge here. The variety of vegetation supports a diversity of wildlife as well. Critical habitat is provided for all animals, especially for protected species and nesting seabirds on outlying islands.

The cultural resources of Acadia National Park document human activities that span 5,000 years. Acadia's human history begins with centuries of seasonal use by native peoples followed by a period of European contact, exploration, and settlement. Decades of commercial use by lumbermen, shipbuilders, and fishermen overlapped and even fostered increased pressure for conservation and the evolution of tourism. Today, over three million visitors seek Acadia's gifts, either by trail, boat, bicycle, vehicle, or through quiet contemplation.

Acadia National Park provides many opportunities to increase our understanding of natural systems and human impact on them.

A living laboratory since the 19th century, Acadia continues to offer significant possibilities for education, continued ecosystem monitoring, and research that generates valuable data. The park's professional biologists who monitor air and water quality, develop plant and animal inventories, study individual species, and conduct other investigations, continue to add to Acadia's foundation of historic scientific reports.

The natural landforms of Acadia National Park illustrate the dynamics of many geologic processes. The geologic record at Acadia is displayed as a living textbook. The park's granite mountains are surrounded by sedimentary and metamorphic rocks, covering a time span of half a billion years. The awesome power of glaciers is evident in the valleys and cliff sides, while the on-going assault by the sea reworks the island's edge even today. Significant geographic resources include Somes Sound, the only fjord along the eastern seaboard and Sand Beach, a natural pocket beach composed primarily of shell fragments.

The dramatic beauty and associated qualities of this mountainous island made it deserving of national recognition. Acadia's attributes are on a similar scale to all holdings of the National Park System. Within the national parks are some of the world's greatest ecosystems as well as our country's treasured stories.

THE NATIONAL PARK SYSTEM

The National Park System includes beautiful and significant natural areas such as seashores, lakeshores, mountains, canyons, caves, deserts, coral reefs, and geologic wonders. Also preserved are important pieces of our nation's history such as battlefields, war sites, American Indian sites, and the homes of Presidents, inventors, civil rights leaders, authors, and others of national prominence. Some national park titles are familiar to most people while others are more obscure. A site can be called a national park, historic site, historical park, monument, parkway, lakeshore, seashore or any of 11 other titles. The National Park Service now preserves for the people of the United States over 380 sites representing some of the most cherished natural and cultural areas of our nation.

Yellowstone is often highlighted as the first national park, created for a "public park or pleasuring-ground for the benefit and enjoyment of the people" in 1872. Other parks such as Sequoia, Mount Rainier, Crater Lake, and Glacier were created between the 1890s and early 1900s.

By 1916, the United States Interior Department oversaw about a dozen national parks and around 20 national monuments (including Sieur de Monts National Monument, later to become Acadia National Park). The National Park Service itself was created by an act, signed by Woodrow Wilson on August 25, 1916. It directed the service to "...*conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*"

This mission continues into the 21st century. The dual directive to preserve the land, history, and wildlife while making them available for public enjoyment proves increasingly difficult. Yet, the National Park Service is directed to accomplish both with units such as Acadia. Every individual park's policies are derived from this act. Acadia's specific purpose reads:

1. To protect and conserve the land and water resources, scenery, the natural and historic objects, and the biota within the park boundary.
2. To promote and regulate the use of the park for the benefit and enjoyment of the people in such manner and by such means as will leave the park resources unimpaired for the enjoyment of future generations.
3. To protect and preserve the scenic, ecological, historic, archeological, and cultural resources of the Acadian archipelago and to limit development of the islands to preserve their natural qualities and traditional resource-based land uses.

Is this a pretty big job? Absolutely! Merely setting property aside does not guarantee that it is protected. Outside influences from water pollution, air pollution, and loss of surrounding habitat degrade the “protected” area inside the park boundary. Through the dedicated work of park employees, whether they are educators, law enforcement rangers, maintenance workers, biologists, or administrators, the value of national parks is instilled in park visitors. This understanding and appreciation will naturally influence the appropriate stewardship of our nation’s parks. Acadia’s staff hopes you will share in these efforts and be a partner for protection. After all, Acadia National Park belongs to all of us, and to our future.

**Letter excerpts from statements by Secretary of the Interior Franklin K. Lane; former President Theodore Roosevelt; Acadia founder George B. Dorr; David White of the U.S. Geological Survey; and M.L. Fernald of Harvard University.*



About this Guide

The purpose of this guide is to provide group leaders, educators, bus drivers, tour operators, employees working with park visitors in the service or recreation industry, and concession supervisors accurate information about Acadia National Park. The primary objective is that all employees or tour guides who work with the visiting public will be trained sufficiently about the mission of Acadia National Park. This understanding in turn will further park education efforts and result in the on-going protection of Acadia's resources.

Because of the variety in guide user needs, some information is repeated in different sections. For example, site specific information that can be used as a touring script may have the same information as a fact sheet on the subject, although presented differently. Whereas one person may need the information in a script format, another may only want to use a fact sheet for their employees to better understand a subject. Repetition of material is meant to assure inclusion of all groups using the *Guide's Guide*.

USING THE GUIDE

There are five sections plus an appendix.

Section One *Introductory Materials*

This section is divided into three chapters—an introduction to Acadia and the *Guide's Guide*; getting started; plus important park information.

Section Two *Site Specific Information*

This section is divided into 10 chapters about different areas in the park. Each chapter provides the following:

Before You Go - What to Know - Logistics for Specific Park Sites

Location: How to find the site

Area Highlights: Lists the specific areas of interest at the site

Time Allotment: Gives approximate times spent at the site and for different activities

Parking: General parking information for the site

Accessibility: Offers information for what is and is not accessible at each site

Facilities: Whether restrooms, picnic areas, restaurants or shops are available

Safety: Specific safety issues that should be watched for and safety regulations that should be followed

Trailheads and Trail Connections: Names of trails found around the site

At-A-Glance conveys what's important about a specific park site.

Significance: This short paragraph conveys what is unique or of ecological or historical importance of the site. Offers a brief description of the site as well.

Fast Facts: This section is a short list of the important facts for that site. These facts are later expanded upon in the background information/narrative. *Fast Facts* are a quick review or a guideline to important information.

Protect Your Park - How You Can Help: Highlights important considerations and *Leave No Trace* guidelines specific to the site as well as methods to assure minimal impact on the ecology of the park.

Helpful Information: Information found in fact sheets, field guides, and appendix that provide more information or can be used as handouts for your group, depending on their needs.

Background Information/Narrative

Background Information/Narrative: This section provides subject information for the site in a narrative form. It is intended to be used either by a group leader who wants to use it as an outline or to be used directly as a touring script.

Touring Information: Each site's narrative indicates if it is appropriate for large groups, children, or for large groups to get off the bus. Mileage and parking information is provided. Any specific driving instructions are indicated in italics.

Section Three *Fact Sheets* are divided into six chapters designed to give more in-depth information about various topics than the narratives in Section two. They may also be used as informational handouts when training staff. Information is provided for the following topic areas:

- *Wildlife (Mammals, Birds, Amphibians, Reptiles, Fish)*
- *Plants*
- *Land Formations*
- *Tidepools*
- *Resource Management*
- *Cultural History*

Section Four *Recreation Sheets* are designed to give group leaders a general idea for planning recreational activities. The information provided for most of these chapters should be accompanied by maps and or more detailed guides (see appendix for suggested resources). The following topic areas are included:

- *Hiking*
- *Biking*
- *Boat Excursions*
- *Camping*
- *Fishing*
- *Rock Climbing*

Section Five *Working with Youth* offers specific information for groups that work primarily with children.

Appendix

Schoodic Peninsula, Isle au Haut, weather information, frequently asked questions, and supporting information about the park's natural and cultural history.

SECTION ONE – BEGINNING YOUR VISIT

Chapter Two – Getting Started

Driving Information for Tour Guides, Bus Operators

Park Loop Road and Mount Desert Island Maps

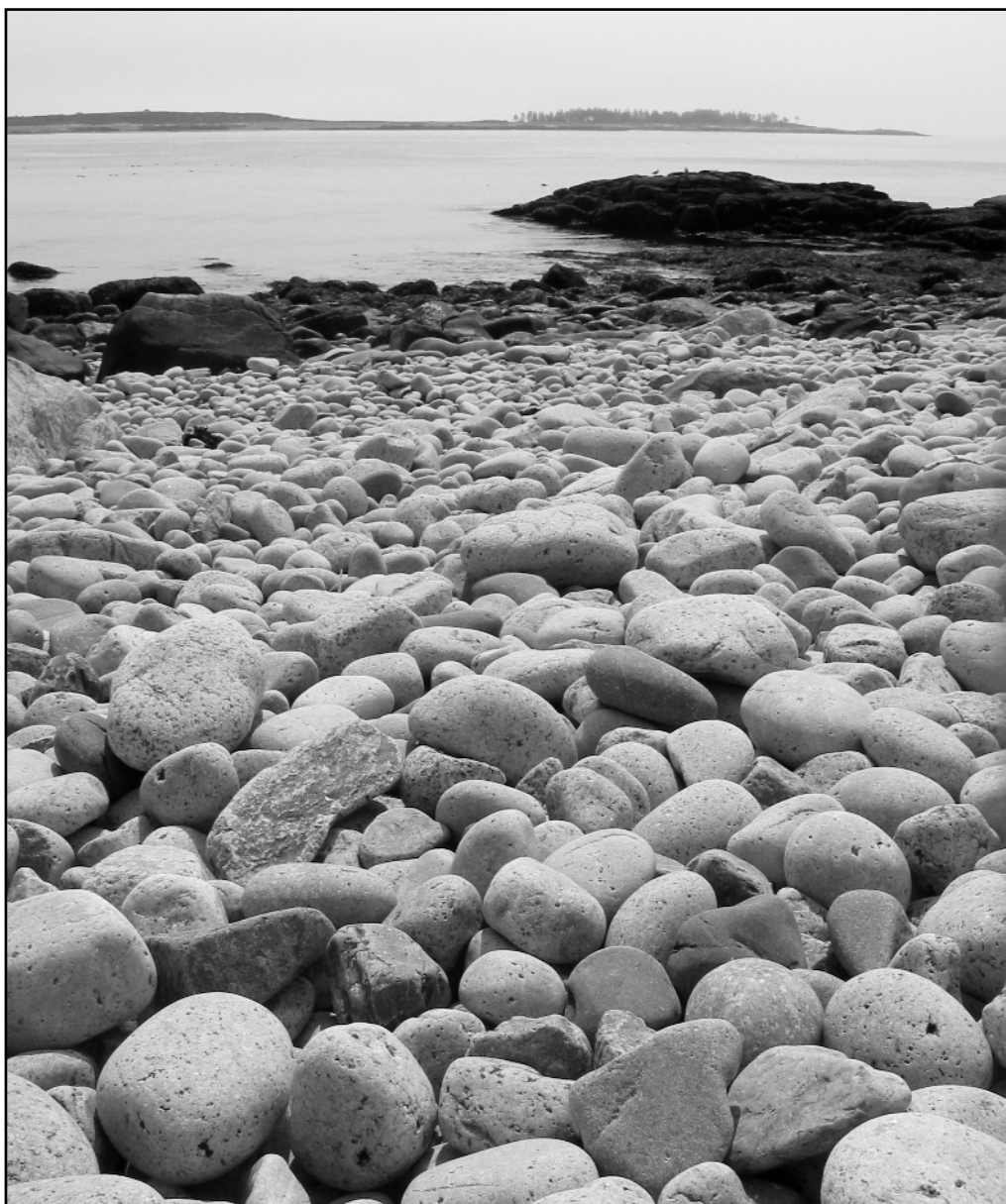
Planning Your Group's Visit

Creating Lesson Plans for Teaching Your Group

Planning Your Trip – A Checklist

Protecting Your Park – *Leave No Trace* Principles

An Introduction to Acadia National Park for Groups – Background Information/Narrative





Driving Information for Tour Guides, Bus Operators

DRIVING REGULATIONS

- Maine State Law requires seatbelts to be worn at all times.
- Parking is allowed in the right hand lane of the one-way section of the Park Loop Road, except where posted.
- Park Loop Road speed limit is a maximum of 35 mph; some areas 25 mph.
- State route speed limits vary. Please follow them.
- No buses or recreational vehicles on Sargent Drive.
- Stanley Brook Bridge clearance 10'9".

Mileage information in the Guide's Guide for:

Chapter 5-Chapter 10

The Park Loop Road and Cadillac Mountain Road is taken from the start of the Park Loop Road at the visitor center and listed in the order of driving the entire loop and ending on the summit of Cadillac Mountain.

Chapter 11

Park areas on State Route 233 and State Route 198/State Route 3 are taken from the junction of State Route 233 and State Route 3 in Bar Harbor.

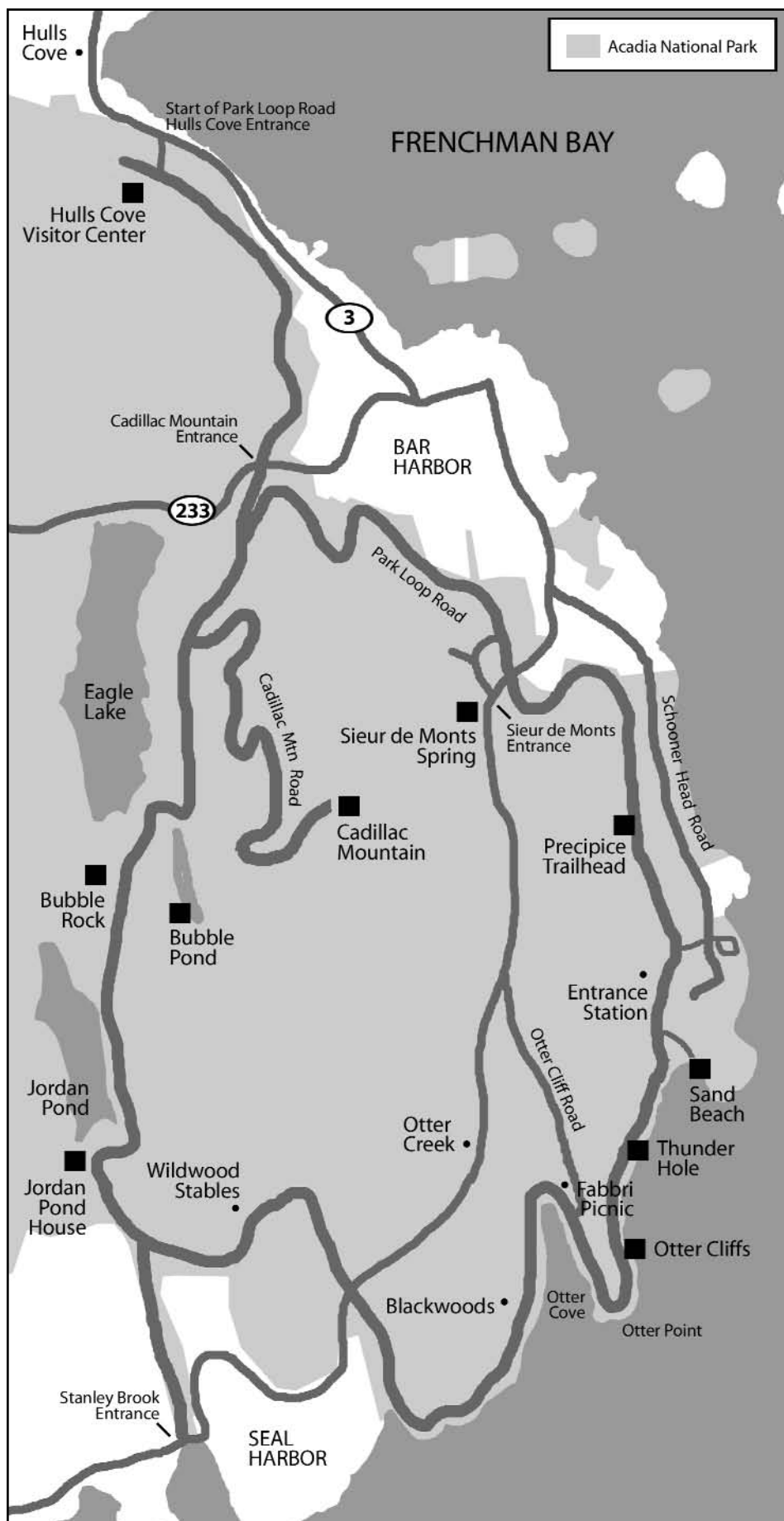
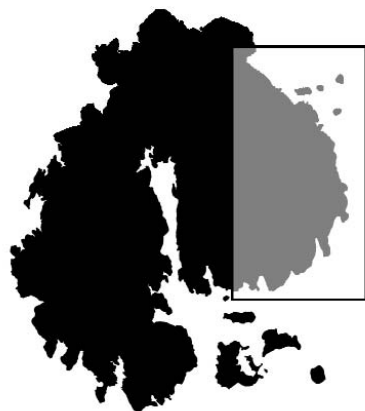
Chapter 13

Acadia's west side is taken from the intersection of State Route 102 and State Route 198 in Somesville.

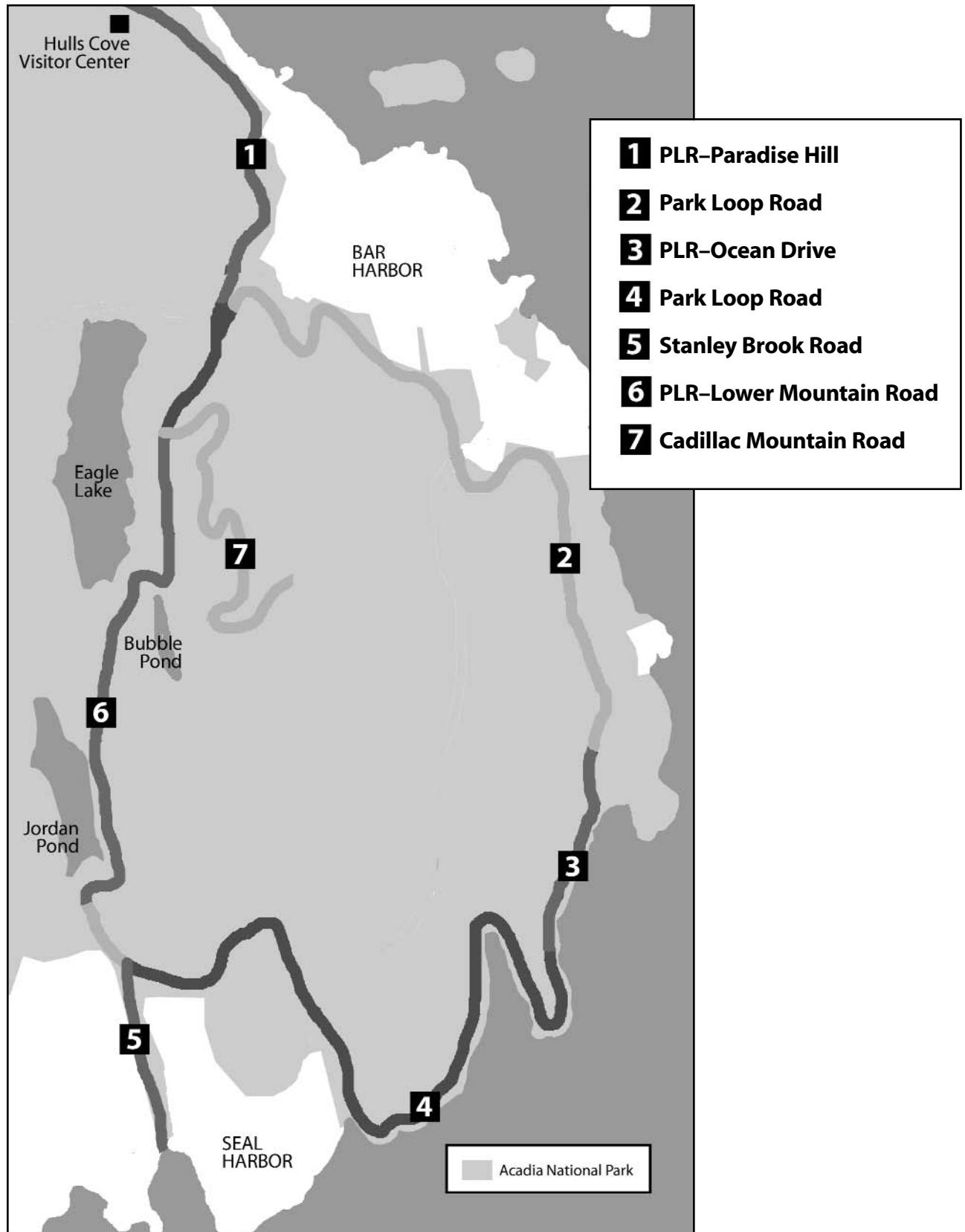
MILEAGES

| | | |
|-------------------------------|--------------------------------------|------------|
| Ellsworth to: | Mount Desert Island (Trenton Bridge) | 10 miles |
| Trenton Bridge to: | Hulls Cove Visitor Center | 8 miles |
| | Bar Harbor | 10.2 miles |
| | Somesville | 2.7 miles |
| | Northeast Harbor | 8.9 miles |
| | Southwest Harbor | 7.7 miles |
| | Seawall Campground | 12.6 miles |
| | Bass Harbor | 10 miles |
| Bar Harbor to: | Blackwoods Campground | 5 miles |
| Hulls Cove Visitor Center to: | Sieur de Monts Spring | 5.6 miles |
| | Sand Beach | 8.7 miles |
| | Cadillac Mountain Road (direct) | 3.5 miles |
| | Jordan Pond (direct) | 7.5 miles |

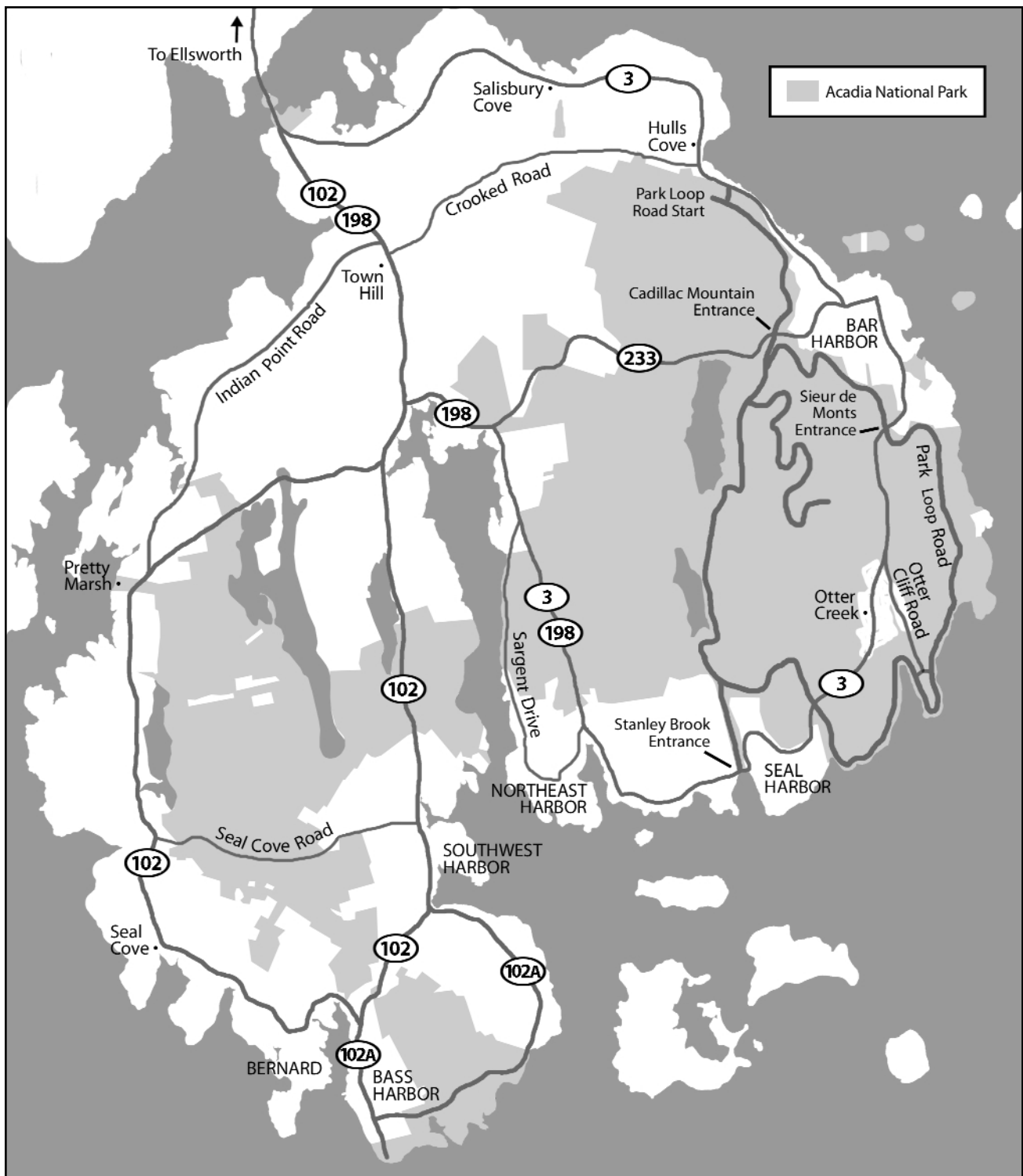
Park Loop Road Highlights



Park Loop Road (PLR) Section Names



Mount Desert Island Driving Map





Planning Your Group's Visit

Knowing your group and the purpose of your visit to Acadia National Park will help to plan a trip that meets the needs of the participants and protects Acadia. Please familiarize yourself with Acadia National Park – A Park Like No Other (page 1-3), *Leave No Trace* guidelines for protecting the park (page 1-21), and important park information (page 1-25). Contact park headquarters at 288-3338 to check on any current closures or new policies.

KNOW YOUR GROUP

Training staff to provide information? Sections specific to park sites and drives in this guide offer background information for training and appropriate fact sheets to give your staff. Training staff about Acadia National Park makes their job easier to educate the public and thus protect the park.

Is your group interested in recreational activities? Review the *Leave No Trace* principles on page 1-21. Be sure that your group follows them. Check the fact sheets in the recreation section of this guide about hiking trails, bicycling, and other activities. To turn a recreational outing into an opportunity for education, familiarize yourself with the fact sheets that are pertinent to the area you are visiting.

Are you traveling with children? Look for the Kid symbol (K) for specific park areas good for children. The educator section of this guide has some worksheets for working with children in suggested park areas. Familiarize yourself with ways to help protect the park and please impart this information to the children. Self-guiding trails (brochures included in this guide) are a great way to involve children in learning about different park habitats and history. The fact sheets can help you as a leader to educate your group about the importance of Acadia National Park. Consider contacting the park's education coordinator at (207) 288-8822 before your arrival to answer any questions you may have.

Are you leading a bus tour? Each chapter specific to park sites provides driving directions, mileage, time estimations, and narratives of park highlights that can be used as a script. Familiarize yourself with the park map and park fees in advance. Know where the restrooms are located. Choose stopping points that will handle a large group easily and quickly. These areas are indicated in each section of the guide with the symbol (LG). For more in-depth information, review the fact sheets.

Are you leading a small group interested in learning about the cultural and/or natural history of the park? Use the fact sheets to provide details about Acadia National Park. Know the interests of your group and depending on the time you have, focus on only a few subjects.



Creating Lesson Plans Using the *Guide's Guide*

If you are training staff about Acadia National Park or are interested in teaching your group more about the park's history or environment, please review these guidelines for planning lessons.

1. First things first: read the following information

It is important that you as the leader or trainer are familiar with the following:

Acadia National Park - A Park Like No Other: page 1-3

About this Guide: page 1-7

Planning Your Group's Visit: page 1-17

Leave No Trace Principles: page 1-21

Acadia National Park Regulations: page 1-39

Consider making copies of *Acadia National Park - A Park Like No Other* and *Leave No Trace Principles* to give to your group.

2. To plan: answer some questions first

What are your objectives? Write down a few objectives for what you would like to teach your group. Each site-specific area in the *At A Glance* section explains the significance of the site, some fast facts about the area, and how to help protect that section of the park. This section can be used to help develop your objectives and learning outcomes.

Are you working with a large or small group? Large groups are best suited for places like: Cadillac Mountain summit; Sand Beach; Ocean Trail; Jordan Pond area; Carriage Roads.

What areas in the park are best suited for your objectives?

Some are more obvious than others—if you're teaching about Jordan Pond, that's the best location. Other options:

Shoreline Features: Ship Harbor Trail

Wildlife: Park Loop Road from Sieur de Monts Spring to the Precipice

Water Quality and Air Quality: Combination trip to Jordan Pond and Cadillac Mountain

Acadia's Plants: Sieur de Monts Spring; Acadia Wild Gardens; Jesup Path; Beginning area of Dorr Mountain trail

Geology: Sand Beach and the Great Head Trail

Acadia's Islands: Bar Island

Coastal Maine History: Islesford Historical Museum; Carroll Homestead

Park History: Sieur de Monts Spring

What materials do you need to read to provide appropriate information for your group? In each section on park sites is a list of helpful fact sheets and field guides as well as information in the appendix. Read these and if desired, make copies for your group.

3. Outline what you would like to say

Begin by reading the background information/narrative for the area that you will be covering. Once you are familiar with this, read the suggested helpful information listed in each section. From these two sources, outline what you will do with your group. The narratives included in each park site section are suggestions for information presentation. They can serve as a guideline or as a touring script.

**4. Review the Background Information/Narrative for
“An Introduction to Acadia National Park” on page 1-23**

This is an optional script for leaders to use for introducing the park to their group.

5. If possible, visit the planned site so you can become familiar with the area

Each site-specific section includes logistic information (*Before You Go - What to Know*). Review these so you can be familiar with what the site offers in the way of facilities, highlights, etc.



Planning Your Trip – A Checklist

- Familiarize yourself with the beginning of this guide and appropriate sections for your trip.
- If needed, contact the park or other appropriate information centers to answer any further questions you may have or to have additional informative brochures mailed to you.
- If desired, acquire detailed hiking maps, guides, and other books through mail-order at Eastern National or purchase at park visitor centers. (See appendix for helpful books)
- Make arrangements at specific locations for your group, i.e. Jordan Pond House, Wildwood Stables, and the Abbe Museum.
- Prep any handouts or materials you would like your group to have.
- Prepare a first aid kit, and if necessary, have appropriate medical release forms.
- Know emergency numbers for the area and/or participants.
- Know where the restrooms are.
- Be sure your group knows what they are individually responsible for i.e. snacks, water, sunscreen, insect repellent, etc.
- Check weather conditions. For general weather guidelines, see Appendix A.
- Be sure your group knows what to wear—layers that can be shed or added as necessary is best. Often mittens, rain gear, and a hat are necessary. Good appropriate shoes are especially important. Sneakers are adequate for most trails. Shoes with non-slippery soles are a must for shoreline exploration.
- No matter your group, please impress upon them the principles of *Leave No Trace*, important outdoor ethics to follow to help protect Acadia National Park. Remember that removing anything except litter from a national park is prohibited. Even a small periwinkle shell might be a home for a hermit crab.



Protecting Your Park – *Leave No Trace* Principles

Education leads to appreciation and appreciation leads to protection. By providing valid reasons to your group to respect Acadia's mission through appropriate behavior, you are playing an important role in the on-going preservation of Acadia National Park. This in turn furthers understanding of the park's fragile nature and will lead to the achievement of park management objectives.

Following *Leave No Trace* principles when visiting the park assures that you and your group are part of the solution and a partner for protection. The *Leave No Trace* program is a nationwide initiative by federal land agencies utilizing principles put forth by the National Outdoor Leadership School (NOLS). The main objective of the program is to reduce the evidence of park visits thereby minimizing the adverse effects on local flora and fauna.

PLAN AHEAD AND PREPARE

- Plan ahead and prepare what your group will do. If you need further information, or are unsure if an activity is appropriate, please contact the park to have questions answered.
- Consider your group size. Larger groups should go to areas that can handle them rather than areas that can only handle smaller groups. Divide your group if it is large. For example, a group of 20 youth with 4 counselors might consider making them separate groups of 6 rather than a group of 24. Remember, good maps are essential.

CAMP AND TRAVEL ON DURABLE SURFACES

- Remain on established hiking trails and refrain from stepping on fragile plants while enjoying Acadia's rocky summits.
- Bicycle use is limited to park roads and certain carriage roads. Bicycling on hiking trails is prohibited.
- Consider that Blackwoods and Seawall campgrounds host thousands of people a year. It's easy to see the impact over time if everyone ignored some key requests such as: no cutting of trees or limbs, use appropriate bathroom facilities, dispose of trash appropriately, camp on the provided campsite.
- Backpacking is prohibited in Acadia. The park's small size could not accommodate the potential number of interested backpackers.
- Acadia's jigsaw boundary line means private property and federal lands are joined. If traveling through private land, please respect the landowner's rights.

PACK IT IN — PACK IT OUT

- Do not bury trash as animals will dig it out. Even if it is biodegradable, peanut shells, orange peels, egg shells, etc. are unsightly and not good for wildlife.
- If you find trash left by others, please pack it out.

PROPERLY DISPOSE OF WHAT YOU CAN'T PACK OUT

- If a restroom is not available, urinate far from the trail.
- If you can't carry out human waste, a small "cathole" six to eight inches deep, 200 feet from the trail and any water sources is the preferred method for burial of feces. Pack out toilet paper.

LEAVE WHAT YOU FIND

- Do not remove rocks, shells, plants, flowers, cultural artifacts, etc. from the park. Those who choose to do so affect the landscape of the park. For the enjoyment of all, please leave things where you find them.
- Bring cameras so you can take photo memories home.
- Take a mental picture. This works especially well with children who don't quite understand why they can't take something.
- Avoid disturbing wildlife by refraining from chasing, stalking, and especially not feeding animals.
- Dogs must be on a leash no longer than six feet. They are not allowed on the six ladder trails, the two sand beaches, climbing areas, or seabird islands.
- Keep it quiet. Please reconsider the use of modern conveniences such as portable radios and tape players. If using cell phones or GPS devices use them discreetly.
- Please do not build new cairns or create "rock art." Extra cairns only lead to hiking confusion, and "rock art" takes away from the natural beauty of the landscape. Rocks removed from thin mountain soils contribute to further erosion.

USE FIRE RESPONSIBLY

- Open fires are not allowed in the park except in designated picnic areas and campgrounds where grills or fire pits are available.
- Be sure the fire is put out upon leaving.
- Wood may not be collected in the campgrounds.



An Introduction to Acadia National Park for Groups Background Information/Narrative

NOTE: The following is a suggested narrative for starting any trip to Acadia National Park whether your group is traveling by tour bus, hiking the park trails, or enjoying the carriage roads. Teaching your group about all that Acadia encompasses will instill in them a greater appreciation for this park and the National Park System.

Acadia National Park, established as the first national park east of the Mississippi, is one of over 380 units administered by the National Park Service. Acadia's mission, like all other national park sites, is "(to) preserve unimpaired the natural and cultural resources... for the enjoyment, education, and inspiration of this and future generations." This visit today highlights a portion of Acadia's exceptional landscape well worthy of that protection. To aid in the National Park Service's mission, park staff request that you remember to *Leave No Trace* by:

Remain on established trails.

Step lightly to avoid trampling fragile plants.

Respect wildlife with quiet voices and no feeding.

Leave what we find for all to enjoy.

Pack in-pack out (dispose of all litter properly).

Acadia's rounded granite mountains, forested valleys, large lakes, small ponds, marshes, rocky headlands, and quiet coves await discovery in this small national park. These environments shelter over 1100 plant species, 40 mammal species, over 300 birds and a multitude of smaller creatures.

Certainly, recreational opportunities abound. Strenuous mountain climbs and leisurely walks await those who venture from their vehicle. Carriage roads for use by walkers, bikers, or horses make Acadia accessible for all. Many lakes and ponds are popular for canoeing, kayaking, and fishing. Boat cruises take advantage of the ocean environment.

Visitors today are a current page in the history of this land. Pre-historic people and the historic Wabanaki Indians knew this land long before Samuel Champlain named it the "Isles des Monts Deserts." After 150 years of quarreling between the French and English for ownership of North America, settlers came in earnest taking advantage of the ocean's proximity and island's generous resources. The mid-1800s brought visitors who saw those same resources as a spring of inspiration and respite. Some worked to create a sanctuary that became Acadia National Park.

As part of the three million people who visit Acadia each year, and like those who came before us, we will leave with our own unforgettable impression of Acadia National Park.

After giving this park introduction, review your itinerary with your group. Explain time expectations, safety concerns, and any other information you feel is necessary for them to know.

SECTION ONE – BEGINNING YOUR VISIT

Chapter Three – Important Park Information

- Park Fast Facts
- Visitor Services
- Park Activities
- Park Facilities
- User Fees
- Commercial Users
- Acadia National Park Regulations





Park Fast Facts

DATE ESTABLISHED

- July 8, 1916 *Sieur de Monts National Monument*
- February 26, 1919 *Lafayette National Park*
- January 19, 1929 *Acadia National Park*

LOCATION AND AREA

Most of Acadia National Park is on Mount Desert Island, located mid-way along Maine's coast. The park is a one-hour drive to the southeast from Bangor. Schoodic Peninsula and seven other islands including Isle au Haut are also preserved. Acadia holds over 48,000 acres.

- 37,570 on *Mount Desert Island*
- 2,728 on *Isle au Haut*
- 2,266 on *Schoodic Peninsula*
- 10,452 in *conservation easements*

PARK HIGHLIGHTS

- *Hulls Cove Visitor Center*: Provides information to plan your trip
- *Sieur de Monts Spring*: Nature Center, Wild Gardens of Acadia, Abbe Museum
- *Precipice Trailhead*: Peregrine nesting site; Interpreter on site in May/June/July
- *Sand Beach*: Natural pocket beach composed primarily of shell
- *Thunder Hole*: Rock chasm that occasionally thunders at mid-tide rising
- *Jordan Pond*: Outstanding glacial lake and mountain scenery; Jordan Pond Tea House for tea and popovers
- *Carriage Roads*: 45 miles of gravel roads in the park for walking, bicycling, or horseback riding
- *Bubble Rock*: Large glacial boulder perched on side of South Bubble Mountain
- *Cadillac Mountain*: Highest mountain along the eastern seaboard at 1,532 feet
- *Sargent Drive/Somes Sound*: Only fjord along the eastern seaboard; bisects Mount Desert Island into east and west side
- *Islesford Historical Museum*: Holds artifacts of a seafaring people; on Little Cranberry Island
- *Echo Lake Beach*: Popular swimming beach—west side
- *Seawall Picnic Area*: Popular picnic area on the ocean—west side
- *Bass Harbor Lighthouse*: One of the most photographed lighthouses in Maine; on west side near town of Bass Harbor

QUICK STATISTICS

- *Fifth smallest national park, one of the top 10 visited national parks*
- *120 miles of biking trails*
- *45 miles of carriage roads in park*
- *Park Loop road—27 miles*
- *26 mountains—Eight mountains over 1000 feet (Cadillac, 1530; Dorr, 1,270; Penobscot, 1,194; Champlain, 1,058; Sargent, 1,373; Pemetic, 1,248; Bernard, 1,071; Gilmore, 1,036)*
- *26 lakes and ponds on Mount Desert Island (Deepest lake—Jordan Pond, 150 feet)*

FLORA AND FAUNA

- *1101 species of flowering plants*
- *40 species of mammals*
- *11 species of amphibians*
- *7 species of reptiles*
- *338 species of birds*
- *31 species of fish*

VISITATION

The park receives almost 3 million visitors a year. The busiest months are July, August, and September; slowest months are December, January, and February.

WEATHER *(See also Appendix A)*

Spring: Low temperatures—30s; high temperatures—70 degrees; frequent rain; average yearly rainfall—48 inches yearly

Summer: Low temperatures—50s; high temperatures—high 70s to low 80s; fog common

Autumn: Low temperatures—30s; high temperatures—low 70s; cool sunny days; rain storms and/or snow can be expected

Winter: Low temperatures—zero to teens; high temperatures—20s; mixed precipitation of rain, ice, snow; average snowfall—61 inches



Visitor Services

ACCESSIBILITY

The park does have accessible facilities in some areas, including campsites, trails, and restrooms. Accessible areas are indicated in each section of this guide specific to park sites. Check appendix for full accessibility guide. Park information centers also have copies.

CAMPING

There are two park campgrounds, Blackwoods off of State Route 3 and Seawall, off of State Route 102A. See the recreation section for more information.

INFORMATION CENTERS

Hulls Cove Visitor Center

Hulls Cove Visitor Center, located off of State Route 3 in Hulls Cove, is open from mid-April to October 31. For more information, see page 2-1.

Park Headquarters

The park headquarters on Route 233, three miles west of Bar Harbor, does not have facilities or services for groups but can be contacted for information or in emergencies. From May through October it is open 8:00am–4:30pm, Monday through Friday, except on federal holidays. From November through April it is open 8:00am–4:30pm daily, except for Thanksgiving, Dec. 24, 25, and Jan. 1.

Other Park Information Centers

Thompson Island, just over the bridge from the mainland on State Route 3, is open from June until mid-October. Hours are 9am–5pm. The Nature Center at Sieur de Mont Spring is open from June through September. Hours are 9am–5pm. Park staff at Blackwoods and Seawall campgrounds can also provide information.

PARK NEWSPAPER/PARK MAP

The park's newspaper, the *Beaver Log* can be picked up at information centers (also available online). It provides listings of ranger-led programs such as hikes, walks, evening programs, boat cruises, and children's programs as well as helpful information about your visit. The park map is designed primarily for orientation to the highlights of Acadia. It is not a hiking map and does not show all roads on Mount Desert Island. A limited number of these two publications may be given to group leaders upon request.

PARK PHONE/ADDRESS FOR FURTHER INFORMATION

*Acadia National Park, PO Box 177, Bar Harbor, ME 04609
(207) 288-3338 (Voice/288-8800 TTY); Internet: www.nps.gov/acad/home.htm*

PARK PHONE NUMBERS (ALL AREA CODE 207)

*Emergency: 911
Park Ranger Emergency Only: 288-8791
Park Ranger Information/(i.e. permits, fees, etc.): 288-8786
General Park Information: 288-3338
Park Education Coordinator: 288-8822*

RANGER-LED ACTIVITIES

The park offers ranger-led walks, hikes, boat cruises, and evening presentations from mid-June through mid-October. With the exception of evening presentations, they are primarily for the general public, and not for groups. For special request program possibilities, call (207)288-3338.

SUPPLEMENTARY VISITOR INFORMATION

Acadia Corporation

Acadia Corporation is a Maine-owned company operating with the National Park Service to provide food service and merchandising facilities in the park. The Acadia Corporation operates the historical Jordan Pond House Restaurant and Gift Shop as well as gift shops at Cadillac Mountain and Thunder Hole. Contact Acadia Corporation at P.O. Box 24, Bar Harbor, Maine 04609 or (207) 288-5592.

Acadia Information Center (private)

(207)-667-8550 or (800)-358-8550

Chambers of Commerce

*Bar Harbor, Maine 04609: (207) 288-5103
Mount Desert-Northeast Harbor, Maine 04662: (207) 276-5040
Southwest Harbor, Maine 04679: (800) 423-9264
Deer Isle/Stonington, Maine: (207) 348-6124 (Isle au Haut)
Acadia Information Center, Trenton, Maine: (207) 667-8550*

Eastern National

A nonprofit cooperating association offering book sales in the park.
PO Box 177, Bar Harbor, ME 04609; (207) 288-4988

Traveler's Information Station

For those traveling on State Route 3 from Ellsworth to the park, information is available on radio station 1610AM. Watch for signs from Ellsworth before the Mount Desert Island bridge alerting travelers for when the station is in range.



Park Activities

BICYCLING

Carriage roads are suitable for mountain bikes. The Park Loop Road and the primary state routes bear heavy traffic, particularly in July and August. They should be used with extreme caution. Bicyclists must obey all traffic regulations. Bike rentals are available in nearby towns. Check the recreation fact sheets of this guide for more information.

BOATING

A number of lakes and ponds on Mount Desert Island permit boating. There is a 10 horsepower limit on Jordan Pond, Eagle Lake, Upper and Lower Hadlock Ponds, and Echo Lake. There is no horsepower limit on Long Pond. All towns have launching areas for salt water near town docks and municipal piers. The law requires you to carry a coast guard approved life vest for each passenger. A better idea is to wear them. It could save your life! Canoes, kayaks, sailboats, and motorboats can be rented in surrounding communities. A variety of commercial vessels offer ferry service, fishing, nature cruises, sailing, and whale watching excursions.

CARRIAGE RIDES

Wildwood Stables provides the tradition of horse-drawn carriage tours along the scenic carriage roads in Acadia daily from mid-June to early October. The roads were built between 1913 - 1940 by John D. Rockefeller, Jr. and are the best example of broken stone roads in the United States. Wildwood Stables also offers a horse camp for visitors wishing to bring their horses with them. No horseback riding is offered through Wildwood. Wildwood Stables is located on the Park Loop Road, one half mile south of the Jordan Pond House Restaurant. Contact the stable directly for reservations (207) 276-3622.

FISHING

Freshwater fishing requires a Maine state fishing license for residents 16 years or older and non-residents 12 years or older. Non-resident licenses can be purchased for the season or for shorter periods in town offices and some local businesses. Ocean fishing requires no license. Be cautious of surf conditions. Seaweed and algae covered rocks are extremely slippery.

HIKING

Over 120 miles of trails and 45 miles of carriage roads cover Acadia National Park on Mount Desert Island, as well as trails on Isle au Haut and Schoodic Peninsula. These range from easy lowland paths to rugged mountain routes. Check the hiking

descriptions in the recreation section of this guide for more general information. For detailed descriptions of trails and carriage roads, commercial guides and hiking maps are for sale at park visitor centers.

MUSEUMS/NATURE CENTERS

The Islesford Historical Museum on Little Cranberry Island is open daily from late June through September. Admission is free. The museum commemorates those who lived on the Cranberry Islands and also preserves a part of the history of maritime New England.

The Abbe Museum at Sieur de Monts Spring contains one of the finest collections of Indian artifacts in the state. It is open daily from mid-May to mid-October. Although the museum is located in the park, it is an independent and self-supporting nonprofit institution. A minimal admission fee is charged to aid the museum's research projects and to help with the preparation of new exhibits and publications. Special presentations will be made to groups with particular interests, but advance arrangements are necessary. A special program is available for students. (207) 288-3519.

The Nature Center at Sieur de Monts Spring includes exhibits about Acadia's protective efforts toward wildlife and plant species and offers some interactive exhibits for children. A book sales area and information services are available. It is open from June-September; Hours from 9:00am to 5pm.

The Wild Gardens of Acadia, adjacent to the Nature Center, is a living field guide to Acadia's plants and associated habitats. Several habitats are represented with labeled plants to help any budding botanist familiarize him or herself with Acadia's vegetation. Operated by the Bar Harbor Garden Club. Open dawn to dusk.

SCENIC DRIVES

The Park Loop Road is a 27-mile paved road that carries visitors through some of the most beautiful features of the park. The road affords views of Frenchman Bay and Acadia's rocky coastline, winds through quiet woods and around mountains, past large glacial lakes, eventually ascending Cadillac Mountain. The road includes a 3-mile spur road from the visitor center to the loop, a 16-mile one-way section, and a 5-mile two-way stretch between Jordan Pond and Cadillac Mountain. The Cadillac Mountain Road is three and a half miles.

In addition to the Park Loop Road, state and county roads may offer scenic views. **Sargent Drive** skirts along the edge of Somes Sound. Access is from Northeast Harbor or off of State Route 198. Watch for small signs. The 5.5-mile one-way loop road located on Schoodic Peninsula, one hour north of Bar Harbor, offers views of the rugged coast on the only part of the park on the mainland.

Federal law requires you to wear seat belts while driving in a national park.

SELF-GUIDING TRAILS

The park has three self-guiding trails. Brochures are available at the visitor center and the trailheads. From November through April brochures are available at park headquarters. Copies of the text for the trails are included in this guide. More specific information on these trails is offered in the appropriate sections of this guide.

- *Jordan Pond Nature Trail*: Off Park Loop Road at south end of Jordan Pond (.5 mile long)
- *Carroll Homestead*: Off State Route 102, one mile north of Southwest Harbor (.5 mile long)
- *Sieur de Monts Spring*: Located at Sieur de Monts Spring off of State Route 3 or the Park Loop Road

SWIMMING

Lifeguards are on duty in the summer at Echo Lake (fresh water) and Sand Beach (salt water). Staffed Memorial Day to Labor Day. **Sand Beach**, located off Park Loop Road, offers ocean swimming. The water temperature rarely exceeds 55 degrees.

Echo Lake Beach on the west side of the island, offers a somewhat warmer swimming experience. Other freshwater lakes located in the park serve as drinking water reservoirs and are closed to swimming and wading.

WINTER ACTIVITIES

Cross-country skiing

Forty-five miles of carriage roads and 41 miles of unplowed park roads are suggested for cross-country skiing and snowshoeing. Skiing on hiking trails is not recommended because of the uneven and steep nature of trails, ice falls blocking the path, and trail routes obscured by snow. Ski equipment and rentals are available in some of the local communities. Ski tracks are sometimes laid down by volunteers on sections of the carriage roads when snowfall exceeds four inches.

Snowmobiling

The Hulls Cove Visitor Center parking lot is a good beginning spot for visitors trailering their snowmobiles wishing to access the Park Loop Road.

- Snowmobile travel is allowed on the 27-mile Park Loop Road (except a one mile section at Jordan Pond House), and most fire roads.
- Only two miles of carriage roads are open to snowmobilers as connector trails. The remaining 43 miles are closed to snowmobilers. Stay to the right; all park routes are two-way travel. Snowmobiles must display a valid state registration.
- Maximum speed limit is 35 m.p.h.
- Snowmobilers must use caution and yield the right of way to anyone not on a snowmobile.
- Towing people on skis or sleds is prohibited. It is illegal to operate a snowmobile while under the influence of liquor or drugs.
- Turn on your white headlight and red tail light half an hour after sunset to half an hour before sunrise, and whenever visibility is less than 500'.
- Drivers under age 10 must be accompanied by a person 18 years or older on their snowmobiles. Drivers 10 to 14 years old must be accompanied by a person 18 years or older. Drivers under the age of 14 are prohibited from operating a snowmobile on any public road. An adult may supervise only one minor.
- Call the park at (207) 288-3338 for updates on snow conditions.



Park Facilities

REST ROOMS

Flush Toilets (Seasonal)

Hulls Cove Visitor Center (Handicap Accessible)
Sand Beach Changing Area
Fabbri Picnic Area (Year-round)
Wildwood Stables
Jordan Pond House
Cadillac Mountain
Seawall Picnic Area
Echo Lake Beach
Pretty Marsh Picnic Area
Thompson Island Picnic Area and Information Center
Sieur de Monts Spring Parking Area
Park Headquarters (Year-round)

Vault Toilets

Thunder Hole
Bubble Pond
Jordan Pond Boat Ramp
Eagle Lake Parking Area
Ship Harbor
Bass Harbor
Acadia Mountain Parking Area
Brown Mountain Parking Area
Parkman Mountain Parking Area
Pretty Marsh

Portable Toilets

Otter Cliffs Parking Area
The Carroll Homestead

PICNIC AREAS

Tables, grills, and rest rooms are available at each area.

Thompson Island
Bear Brook
Fabbri Picnic Area
Pretty Marsh
Seawall



User Fees

The park entrance station, located just before Sand Beach, is open from May through October. 80% of the fees are returned directly to Acadia National Park to help with a backlog of resource management and maintenance projects. The following are current as of the printing of this guide, but because fees do change periodically, please contact the park's fee coordinator at (207) 288-8786 for the most current fee structure.

Acadia Entrance Permit

\$20.00/7 days

Good for entrance into Acadia National Park for one vehicle for 7 days, including the date of purchase.

Acadia Motorcycle/Motorbike Entrance Permit

\$5.00/7 days

Good for entrance into Acadia National Park for one motorcycle/motorbike for 7 days, including date of purchase.

Acadia Pass

\$40.00/Annual

Good for entrance into Acadia National Park for one vehicle for one year from date of purchase.

National Park Pass

\$50.00/Annual

Good for entrance to all national parks, monuments, and federal recreation areas for one vehicle for one year from date of purchase.

Golden Eagle Pass

\$65.00/Annual

Good for entrance to national parks, national wildlife refuges, Forest Service and Bureau of Land Management sites.

Golden Age Lifetime Pass

\$10.00/Life

Good for entrance and half price camping to all national parks, monuments, and federal recreation areas.

Golden Access Lifetime Pass

Free to all US citizens with permanent disabilities.

Good for entrance and half price camping to all national parks, monuments, and federal recreation areas.



Commercial Users

One of Acadia National Park's objectives is that all visitors receive accurate information delivered in a clear, effective way so visits are safe, educational, and enjoyable. This in turn helps visitors best protect the values for which the park was established. As commercial operators who work with park visitors, you are an important part of reaching that objective.

Acadia manages commercial use of the park at levels that will prevent adverse effects on natural, cultural, and aesthetic resources. This management includes reducing or preventing crowding, congestion, and conflicts between visiting groups. Commercial operations that complement Acadia's mission and can be supported by using available National Park Service facilities (parking areas, restrooms, campsites, etc.) may be deemed appropriate.

Commercial Fees

If you have any questions, please contact the fee coordinator in the park at (207) 288-8786.

- Fees are based on the passenger capacity of each tour vehicle, not the number of passengers actually being transported.
- Outings conducted for educational purposes by schools or other bona fide educational institutions may qualify for a waiver of recreation fees if certain criteria are met. A letter stating official recognition as an educational entity is required or, alternatively, proof of educational tax exemption from the IRS or similar state authority. A statement of purpose must also be submitted, including a description of how the visit relates to the resources of the park. These should be sent to the chief ranger's office ahead of time. If approved, a letter to be presented at the time of visit will be issued.
- Fees are payable upon arrival in cash, by U.S. check or money order, or charged on Visa or Mastercard. Make check or money order out for the exact amount of the fee to the National Park Service.
- Turn off bus engines at all stops. The noise and pollution are distracting, irritating, and lessen the visitors' enjoyment of the area. We are sure that your patrons and other visitors will appreciate your compliance.

Commercial Mini-Bus Tour

\$60.00

One Time

Good for one entrance into Acadia National Park for a commercial tour mini-bus with a passenger capacity of 16 to 25.

Commercial Sedan Tour

\$25.00

\$5/person

One Time

Good for one entrance into Acadia National Park for a commercial tour sedan with a passenger capacity of 1 to 6.

Commercial Tour Bus

\$150.00

One Time

Good for one entrance into Acadia National Park for a commercial tour bus with a passenger capacity of 26 or more.

Commercial Van Tour

\$50.00

One Time

Good for one entrance into Acadia National Park for a commercial tour van with a passenger capacity of 7 to 15.



Acadia National Park Regulations

Please help protect park resources and other visitors by abiding by the following regulations. Review these before your visit to the park and be sure that your group is aware of those regulations that will pertain specifically to your visit. Contact the park ranger office at (207) 288-8791 if you have any questions. Failure to comply with park regulations can result in fines or arrest.

ACCIDENTS

Must be reported to park rangers if property damage or personal injuries are involved. Park rangers can be contacted at (207) 288-8791. If an emergency call 911.

ALCOHOL USE AND POSSESSION

Consuming alcohol in any public building, in parking lots, or on designated swim beaches is prohibited. It is illegal to be in the park when under the influence of alcohol or controlled substances. The possession of alcoholic beverages by a minor (less than 21 years old) is prohibited. Moderate and wise use of alcohol is permitted in campgrounds and designated picnic areas.

ATV'S/MOTORBIKES

All motorized vehicles are prohibited on the park trails and carriage roads. All-terrain vehicles are not allowed anywhere in the park. Electric wheelchairs are permitted on the carriage roads.

BICYCLES/HORSES/SNOWMOBILES

Use is permitted only on designated routes. Route maps are available at ranger stations and visitor center. Use is prohibited on all hiking trails.

CAMPING

Permitted only in designated campsites at Blackwoods and Seawall campgrounds on Mount Desert Island. (see Camping section on page 4-19)

CLOSURES

- Cadillac Mountain road and summit closed 12:00 midnight to one-half hour before sunrise.
- Seawall picnic area, Bass Harbor Head, Compass Harbor, and Lake Wood road, parking and shore areas are closed from 10:00pm to 1/2 hour before sunrise.
- Long Pond fire road and Western Mountain roads (except Seal Cove road) closed yearly from October 1 until spring re-opening from one-half hour after sunset to one-half hour before sunrise.
- Park Loop Road is closed from mid-autumn to mid-spring (call for specific date closures) with the exception of a two-mile stretch between Sand Beach and Otter Cliffs, and access to Jordan Pond from Seal Harbor.
- Other park areas may be closed to public use and travel for protection of designated rare or sensitive species including breeding or other critical habitat. Areas will be posted and information will be available at visitor contact stations.

CARRIAGE ROAD CLOSURES

- All carriage roads are closed to motor vehicles except for emergencies and official administrative purposes.
- In the spring when the ground is soft, carriage roads may be closed temporarily.
- The Witch Hole-Paradise Hill loops of the carriage road system are closed to horses.
- The Eagle Lake loop of the carriage road system is closed to horses except between junctions #7 and #8 as shown on the park's official "Carriage Road Users Map."
- Although not part of the park, carriage roads south of Jordan Pond are closed to bicycles.

COLLECTION OF RESEARCH SPECIMENS

Any scientific endeavor, whether as an individual or from an educational institution, shall not collect any items in the park unless a special collection permit has been issued. All research and/or specimen collection conducted in Acadia National Park requires a written study proposal that has been reviewed and approved by the park. Please contact the Chief of Natural Resources at (207) 288-8720.

FEEDING WILDLIFE

Feeding wildlife including sea gulls and any roadside begging animals is prohibited.

FIRES

Fires are prohibited except in provided fireplaces or receptacles in established campgrounds and picnic areas. Only dead and down wood may be collected for fires. Fires may be temporarily banned in campgrounds and picnic areas during periods of high fire danger to protect park resources and reduce the risk of wildfires.

FIREARMS

Must be unloaded and cased or otherwise packed in such a way as to prevent use.

FIRECRACKERS

Sparklers are permitted; other firecrackers are prohibited.

FISHING

A state license is required for freshwater fishing. Licenses may be obtained at town offices on Mount Desert Island.

HUNTING AND TRAPPING

Hunting and trapping on park lands are prohibited.

IN-LINE SKATING/ROLLERBLADES

Use of in-line skates, skate boards, or similar skating or coasting devices is prohibited in the park.

PERMITS

Permits are required for special events, public assembly or meetings, sale or distribution of printed matter, scattering of ashes, business operations (commercial use license), commercial photography, commercial vehicles, and any other special uses. Please contact the chief ranger at (207) 288-8770 for information.

PETS

May not be left unattended and shall be leashed or otherwise physically restrained at all times. Pets are allowed in all park locations except Sand Beach, Echo Lake Beach, Isle au Haut campground, ladder trails, and inside public buildings. It is requested that dogs are not brought on any ranger-led activities. Service dogs or sightseeing dogs may accompany their owner to all park locations.

PICNICKING

Picnicking that involves preparing food by cooking or heating including use of charcoal and gas grills, camp stoves, etc. is permitted only in designated picnic areas. Picnicking without cooking is allowed anywhere in the park.

PUBLIC PROPERTY/NATURAL FEATURES/PLANTS AND WILDLIFE

The possession, injury, destruction, removal or disturbance of park property, or natural resources including animals, plants, minerals, cultural, and archeological objects is prohibited. This includes the collecting of rocks, cobbles, plants, marine organisms, other natural materials or historic objects and artifacts.

SEAT BELTS

Federal law requires that seat belts are worn when driving or riding as a passenger in a national park.

SMOKING

Smoking is prohibited in all federally owned public use and administrative buildings throughout the park. Smoking may be temporarily banned on hiking trails and other areas during periods of high fire danger to protect park resources and reduce the risk of wildfires.

SWIMMING

Under the Safe Drinking Water Act, Eagle Lake, Bubble Pond, Jordan Pond, Upper and Lower Hadlock Ponds, and the south end of Long Pond are closed to swimming by local ordinances because they are public water supplies. Swimming is allowed at Sand Beach and Echo Lake Beach. Glass containers, flotation devices, kites, pets, and athletic sports and games that interfere with other users are prohibited on Sand Beach and Echo Lake Beach.



SECTION TWO — PARK SITES

Chapter Four – Visitor Center

Before You Go – Visitor Center Logistics

At A Glance

Chapter Five – Park Loop Road (Visitor Center to Sieur de Monts Spring)

Before You Go – Park Loop Road (Visitor Center to Sieur de Monts Spring) Logistics

At a Glance

Background Information/Narrative

Chapter Six – Sieur de Monts Spring

Before You Go – Sieur de Monts Spring Logistics

At A Glance

Background Information/Narrative



Chapter Seven – Park Loop Road (Sieur de Monts Spring to Jordan Pond)

Before You Go – Park Loop Road Logistics

At A Glance

Background Information/Narrative – Sieur de Monts Spring to Sand Beach; Sand Beach to Otter Point; Otter Point to Jordan Pond

Chapter Eight – Jordan Pond

Before You Go – Jordan Pond Logistics

At A Glance

Background Information/Narrative

Jordan Pond Area Walk

Chapter Nine – Park Loop Road (Jordan Pond to Cadillac Mountain Road)

Before You Go – Lower Mountain Road Logistics

At A Glance

Background Information/Narrative

Chapter Ten – Cadillac Mountain Road and Summit

Before You Go – Cadillac Mountain Logistics

At A Glance

Background Information/Narrative – Cadillac Mountain Road

Background Information/Narrative – Cadillac Mountain Summit

Chapter Eleven – Park Sites on State Route 233 and State Route 198

Before You Go – Other Park Sites Logistics

At a Glance

Background Information/Narrative

Chapter Twelve – Islesford Historical Museum

Before You Go-Islesford Historical Museum Logistics

At A Glance

Background Information/Narrative

Chapter Thirteen – Acadia's West Side

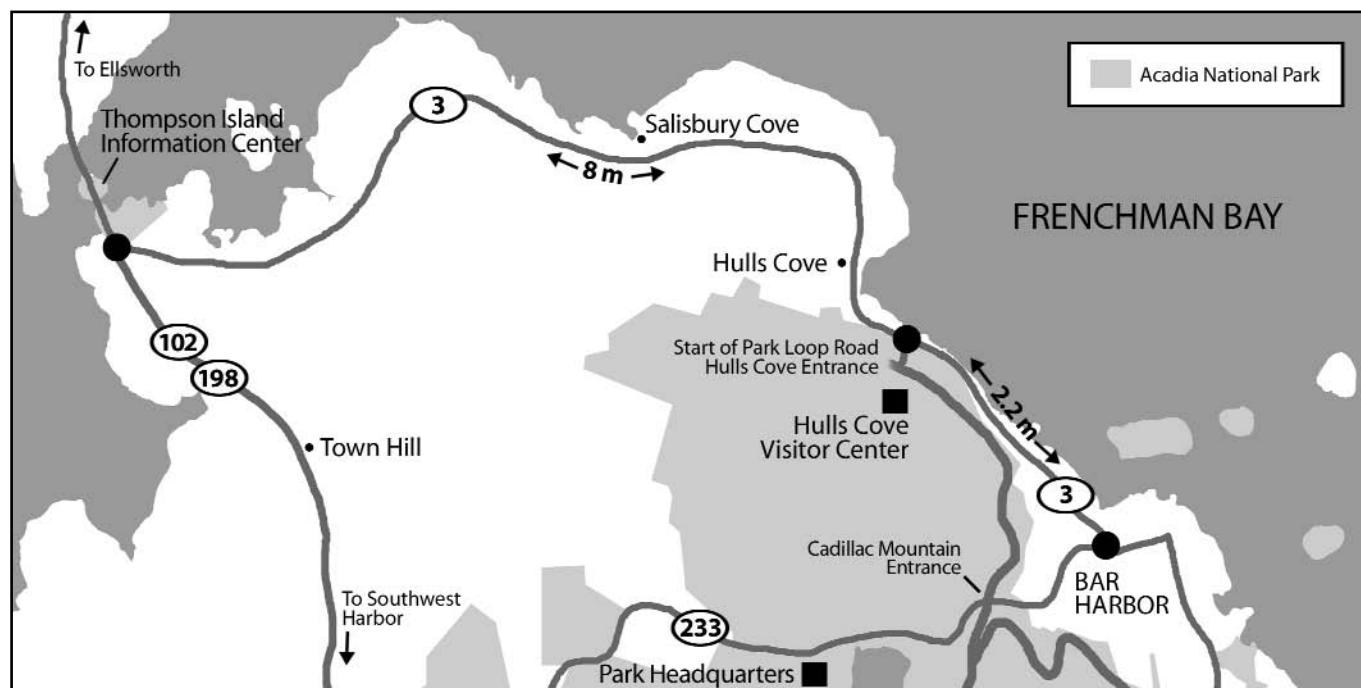
Before You Go – Acadia's West Side Logistics

At A Glance

Background Information/Narrative

SECTION TWO – PARK SITES

Chapter Four – Visitor Center





Before You Go – Visitor Center Logistics

LOCATION

The visitor center is located off of State Route 3 in Hulls Cove, approximately eight miles from the Trenton Bridge (leading on to Mount Desert Island) and 2.2 miles northwest of Bar Harbor. The entrance to the visitor center parking lot and start of the Park Loop Road is clearly marked by a large Acadia National Park sign.

AREA HIGHLIGHTS

Bookstore

A large selection of books and other items are available for sale in the bookstore operated by Eastern National, a nonprofit cooperative partner of the National Park Service. A resource list of some titles is available in the appendix of this guide.

Relief Map

A large relief map at the visitor center showing Acadia National Park on Mount Desert Island helps orient park visitors. Park highlights and the surrounding communities are labeled. Use the relief map to familiarize your group with your planned route. Occasionally, map orientation talks are offered by park rangers.

Video

The 15-minute *Gift of Acadia* captures the essence of Acadia's significance and beauty. It is shown on the hour and half-hour throughout the day. The video is close-captioned for visitors with hearing difficulties. Translation tapes are available for French and German visitors, as well as a narration for the sight-impaired.

Information

Park staff assists both visitors in planning their park trip and tour guides in answering any last minute questions.

Carriage Road Access

At the north end of the main parking lot is a 1/2-mile long access trail to the Witch Hole Pond carriage road loop. It is a steep climb. Walkers and cyclists alike should watch for each other.

TIME ALLOTMENT

Expect to spend one hour at the visitor center with your group.

- *Restroom Visits*: up to 30 minutes
- *Video Watching*: 15 minutes
- *Book Store Browsing*: 15 minutes

PARKING

There are two parking areas for the visitor center. The main parking lot is large and provides approximately 200 spaces for cars and recreational vehicles. A second very small lot behind the visitor center provides accessible parking for tour buses and those who cannot climb the 52 steps to the visitor center.

- *Tour Buses*: From State Route 3 entrance, head straight at the four-way stop to drop off passengers behind the visitor center. From the Park Loop Road, turn left at the four-way stop. A short path leads to the lower level where steps and an elevator access the main visitor center.
- *Accessible Entrance*: Same as tour buses.
- *Vans and Automobiles*: From the State Route 3 entrance, turn right at the four-way stop for the main parking lot. From the Park Loop Road, head straight. The visitor center is at the top of 52 steps. If climbing these steps is difficult for any members of your group, consider using the accessible entrance.
- *Island Explorer Buses*: *Island Explorer* buses travel through the main parking lot and stop for passengers at the large kiosk at the base of the stairs.

FACILITIES

Restrooms are available on both levels of the visitor center. Film, food, sunscreen, etc. is not sold at the visitor center. The closest location for these items as well as for gas is at the Hulls Cove General Store, located 1/3 mile north on State Route 3 in Hulls Cove.

ACCESSIBILITY

The accessible entrance to the visitor center is on the lower level. (See parking information above). For the hearing impaired, the *Gift of Acadia* video is closed-captioned. If needed, arrangements can be made to provide a sign language interpreter on park programs. Reservations for an interpreter must be made well in advance for scheduling purposes. Call (207) 288-3338 (voice)/(207) 288-8800 TTY) for more information. Ask at the visitor center for a booklet describing accessible locations in the park. (Copy in appendix)

SAFETY/REGULATIONS

- Smoking, food, beverages, and pets are not allowed into the visitor center.
- Assistance dogs are always welcome. Please do not leave your pets in a vehicle unattended in July and August.
- Fifty-two steps lead to the visitor center. Please use caution.

TRAILHEADS AND TRAIL CONNECTIONS

- *Witch Hole Pond Carriage Road Access Trail*



At a Glance – Visitor Center

SIGNIFICANCE

The visitor center is an important beginning point for any visit to Acadia National Park staffed by knowledgeable park staff. General information on restaurants, hotels, bed and breakfasts, etc. is not available here. Contact area Chambers of Commerce in advance. Phone numbers are listed on page 1-30.

FAST FACTS

- The visitor center is open from mid-April through October. Hours are 8am–6pm during July and August; 8am–4:30pm or 8am–5pm other months.
- In July and August, lines at information desks are long between the hours of 10am and 2pm. To reduce congestion at the information desks, it is recommended that tour operators ask necessary questions for their group rather than have individual group members ask.
- Maps of Acadia National Park or other informational handouts are not available in quantity. If needed, contact park headquarters in advance at (207)288-3338 to ask about bulk cost.
- The park newspaper, the *Beaver Log*, provides general park information and a listing of ranger-led programs. These park programs are designed to illuminate the various aspects of Acadia National Park for visitors.
- Park passes (see info on page 1-36) for individual vehicles are available here. Tour bus operators should check page 1-37 of this guide then contact the park fee coordinator in advance of their trip for up to date information. The number is (207) 288-8786.

PROTECT YOUR PARK – HOW YOU CAN HELP

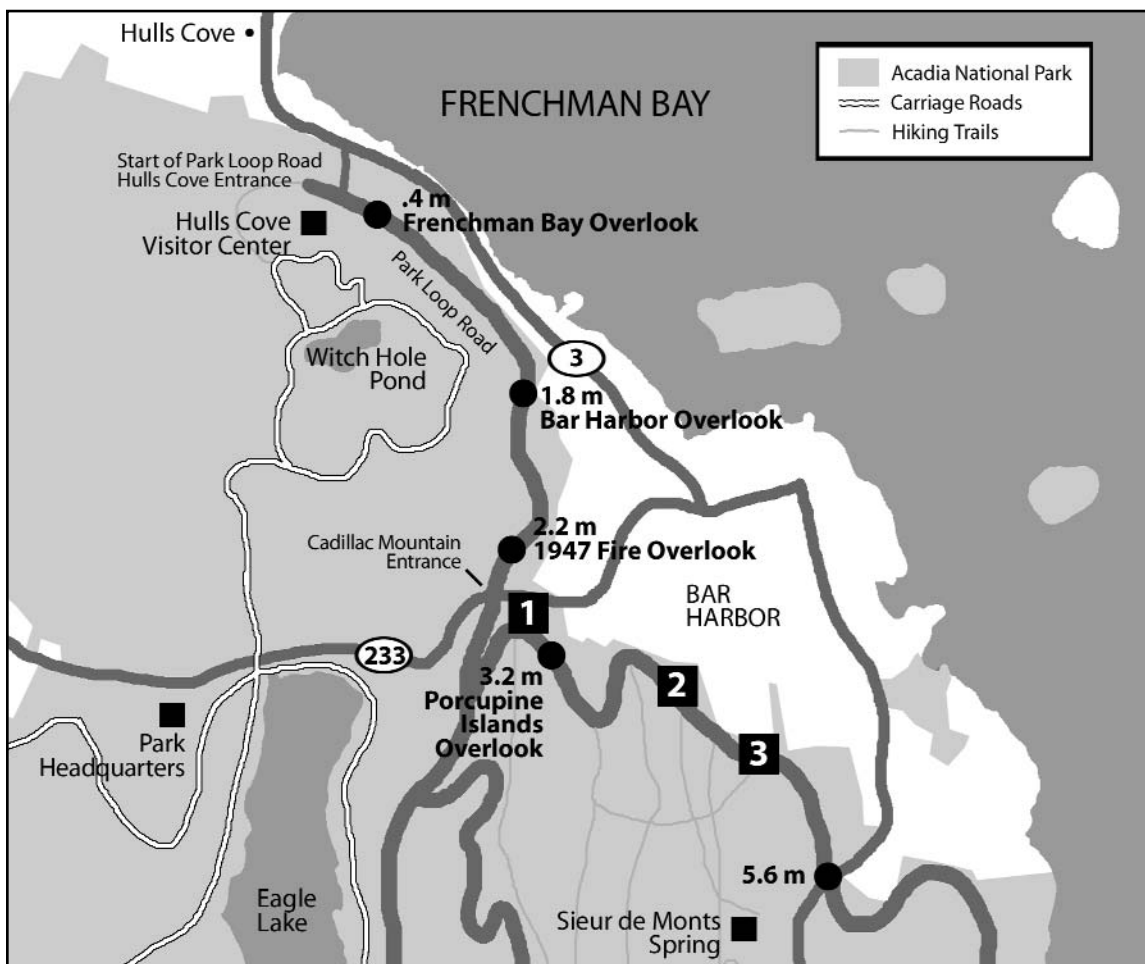
- The visitor center will have any of the latest information on resource protection or areas of concern in protecting the natural and cultural resources of the park.
- Health alerts such as poor air quality will be posted at the visitor center.

HELPFUL FACT SHEETS

Review *Section One – Beginning Your Visit*.

SECTION TWO – PARK SITES

Chapter Five – Park Loop Road Visitor Center to Sieur de Monts Spring



- 1** North Ridge of Cadillac Trail
- 2** Gorge, Kebo and Dorr North Ridge Trails
- 3** Strath-Eden and Jesup Trails



Before You Go – What to Know

Park Loop Road

Visitor Center to Sieur de Monts Spring Logistics

LOCATION

The Park Loop Road travels through most of the eastern section of Acadia National Park. This portion of the guide covers the Park Loop Road from its starting point at the visitor center to Sieur de Monts Spring.

NOTE: The Park Loop Road is covered in three sections in this guide: 1) visitor center to Sieur de Monts Spring, 2) Sieur de Monts Spring to Jordan Pond, and 3) Jordan Pond to Cadillac Mountain Road. The Park Loop Road maps on pages 1-14 and 1-15 show the road's highlights, mileages, and the informal names of road sections.

AREA HIGHLIGHTS

Visitor Center

Information on page 2-1.

Four Overlooks

Pull-offs to views of Frenchman Bay, Bar Harbor, 1947 Fire Overlook (views to Cadillac and Champlain Mountains), and the Porcupine Islands.

Sieur de Monts Spring

Information on page 2-19.

TIME ALLOTMENT

Plan to spend 15 minutes just driving between the visitor center and Sieur de Monts Spring. Plan for 25 minutes with two overlook stops.

- *Frenchman Bay Overlook: 5 minutes*
- *1947 Fire Overlook: 5 minutes*

PARKING

The Park Loop Road becomes one-way after making the left hairpin turn at the intersection of the three mile Paradise Hill spur road with the actual loop. Vehicles may park in the right hand lane of the road. Individual parking areas are noted in the background information/narrative section.

FACILITIES

Restrooms are available at the visitor center and at Sieur de Monts Spring.

ACCESSIBILITY

See specific sections on visitor center and Sieur de Monts Spring.

SAFETY

- Speed limit for the majority of the Park Loop Road is 35 mph, with some areas posted at slower speeds. Maine state law requires seat belts to be worn.
- The three mile road from the visitor center has a two-way traffic pattern. After the intersection with the Park Loop Road, it becomes one-way toward Sand Beach and remains two-way toward Cadillac Mountain and Jordan Pond. Please be alert for cyclists and vehicles parked in the right hand lane on the one-way section of the road.
- In July and August, the road is crowded between the hours of 10am and 3pm.

TRAILHEADS AND TRAIL CONNECTIONS

For descriptions and distances of trails, see the Recreation section of this guide.

Carriage road access at visitor center. Trail access to:

- *North Ridge of Cadillac*
- *The Gorge*
- *Kebo Mountain*
- *Strath-Eden Path*
- *Dorr North Ridge*
- *Jesup Path*

Sieur de Monts trails are covered on page 2-23.



At A Glance

Park Loop Road (Visitor Center to Sieur de Monts Spring)

SIGNIFICANCE

The 27-mile Park Loop Road winds past mountains, ocean views, and lakes. It culminates in a drive up Cadillac Mountain for spectacular panoramic views. The entire 21-mile loop and spur to Cadillac Mountain summit offers visitors the essence of Acadia. The road evolved through the development and rehabilitation of twelve separate road sections between 1921 and 1958 resulting in one of the most scenic roads in the country. Almost anyone who travels it associates the views from this road with their Acadian memories. The 5.6-mile section between the visitor center and Sieur de Monts Spring includes Frenchman Bay views and quiet deciduous forests and meadows.

FAST FACTS

- Mount Desert Island, where Acadia National Park is located, is pronounced *dessert*. The island's name, coined by navigator Samuel Champlain refers to "deserted mountain tops."
- The name Acadia most likely comes from the French who called this area L'Acadie. This was a French version of the name Arcadia, given to the region of North America between the 40th-46th parallel.
- Frenchman Bay's name recognizes the French warships that lay in wait in the 18th century for unsuspecting English ships.
- Beginning in the mid-1800s Mount Desert Island and Bar Harbor became a vacation destination for many city-dwellers.
- A fire in 1947 burned 17,000 acres on Mount Desert Island.

PROTECT YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- Please follow posted speed limits. They are for your protection as well as for the protection of park wildlife.
- Please turn off buses when parking at overlooks or in parking lots. The noise and smell detracts from the experience of park visitors.

HELPFUL INFORMATION

PARK LOOP ROAD (VISITOR CENTER TO SIEUR DE MONTS SPRING)

Fact Sheets:

Bald Eagles 3-24

Acadia's Common Plants 3-50

Fire Management 3-91

Lands 3-94

Acadia's Outer Islands 3-96

Park History 3-105

Acadia's Historic Trails 3-111

Fire of 1947 3-113

Appendix:

Birding on Mount Desert Island (B)

Who's Who in Acadia's History (E)

Quotes (E)

Also:

Acadia National Park - A Park Like No Other 1-3

Leave No Trace Principles 1-21



Background Information/Narrative

The Park Loop Road

(Visitor Center to Sieur de Monts Spring)

Distances are measured from the visitor center.

(LG) FRENCHMAN BAY OVERLOOK

Appropriate for tour bus groups to get off the bus.

Location

Mile .4 The bay stretches seven miles north from its Gulf of Maine headlands, bordered to the west by Mount Desert Island and to the east by Schoodic Peninsula. One of the interpretive signs at the overlook labels the view of islands and mountains.

Parking

The overlook provides 15 diagonal parking spaces. There is adequate space for buses.

Frenchman Bay's name reflects the area's historic French influence. L'Acadie, the French title for this region, most likely originated from the name Arcadia. That title was bestowed in 1524 by Giovanni de Verrazano, the Italian navigator sailing for France, to describe present-day Chesapeake Bay and the Outer Banks of North Carolina shore scenery. It was a cartographer's mistake that placed Arcadia well north of the coastline that had reminded Verrazano of ancient Greek landscapes with beautiful green forests.

The visit of the French nobleman, Pierre Dugua, the Sieur de Mons, and his navigator Samuel Champlain in 1604 marked one of the first European records of this region. King Henry IV gave Dugua authority over the 40th-46th parallel of North America. Imagine receiving a land grant, sight unseen, encompassing present-day Montreal to Philadelphia!

While Dugua and his crew established a settlement on Saint Croix Island along the present-day Maine/New Brunswick border, his navigator, Samuel Champlain set sail down the coast with a handful of men and natives. Although the Saint Croix settlement failed, the name bestowed by Champlain upon this island, the "Isle de Monts Deserts" has endured.

In 1613, a French Jesuit settlement believed to have been established at the mouth of Somes Sound was also ill-fated. Instead of the harsh weather elements that the

Saint Croix settlement succumbed to, the Jesuit colony was attacked by the British. This event, coupled with other skirmishes in the region, marked the beginning of a 150 year French and English struggle for the North American continent. The French took advantage of Frenchman Bay's islands and crooked coastline for hiding tall frigates that would surprise and attack British ships.

By 1759, with the conflict resolved in favor of the English, European settlement began and coastal colonists utilized the land's bounty to supply the needs of a growing nation. Barrel staves shaped from island lumber, ice cut from frozen coves and nearby lakes, cobbles collected from beaches for roads, granite quarried for buildings, and fish harvested from the bays were transported by the trucks of the day, sailing ships, to Portland, Boston, and New York. In 1837, six hundred sets of sails were counted dotting Frenchman Bay.

Shipbuilding was a common sight in many of the harbors and coves. Towering white pine trees were perfect for masts. Schooners, a ship with at least two main masts, were born of a need for fast-moving vessels, able to race back from fishing excursions at the Grand Banks to get top dollar for their catch. Schooners also served well in smuggling illicit goods!

Eventually schooners were replaced by steamships, and today the bay sees mostly pleasure craft, whether private boat, large passenger cruise lines, or the Cat, a car and passenger ferry that makes the trip to Yarmouth, Nova Scotia in 2-1/2 hours. Schooners still appear though, allowing a glimpse into days gone by.

At mile 1.7 is a turn-off to the left that leads to Bar Harbor.

BAR HARBOR OVERLOOK

Passengers remain on bus.

Location

Mile 1.8 This unmarked pull-off offers a view of Bar Harbor. You may prefer to use the following information while driving rather than stopping at this overlook.

Parking

No specific spaces; parallel parking.

Beginning in the mid-1800s, Mount Desert Island was transformed into a well-known vacation spot with Bar Harbor eventually serving as its hub. Those with time to enjoy adventure and relaxation, such as clergy and professors, journeyed here.

Artists, like Frederick Church and Thomas Cole of the Hudson River School, painted mountain scenery and crashing surf. Writers poetically expressed the island's charms. These expressions of the island's beauty lured more people to its shores. Hotels sprang up, including one of the largest in Bar Harbor, The Rodick House, with 600 rooms.

Those who could afford to built cottages—multi-room mansions that gave Bar Harbor's shoreline the nickname "Millionaire's Row." From 1890-1915, Bar Harbor replaced fashionable Newport, Rhode Island as *the* summer resort. This opulent era slowly closed as the effect of income taxes, the Depression, and two world wars took their toll on the financial wealth of many of the summer residents. Cottage upkeep and taxes became cost prohibitive and by the early 1940s, many were torn down or sold at a fraction of their worth. A massive fire in 1947 razed 67 mansions, perhaps to the relief of some of their owners.

1947 FIRE OVERLOOK

Passengers can remain on bus.

Location

Mile 2.2 To the far left is Frenchman Bay and to the far right is Sargent Mountain. The view straight ahead includes: in the foreground, the summits of Cadillac and Dorr Mountains, and in the background, Champlain Mountain.

Parking

Small pull-off without true parking spaces; parallel parking. *Note: interpretive sign.*

In October of 1947, 17,000 acres burned on the eastern side of Mount Desert Island. Ten thousand acres were park land. An exceptionally dry summer led to tinderbox conditions, and a dump fire once thought extinguished revived. On the third day, gale force winds spread the fire rapidly. In three hours, the fire traveled six miles turning numerous cottages, homes, and hotels into rubble. Some Bar Harbor residents fled by boat, while others escaped by car on State Route 3 after bull dozers cleared the way. By the time the inferno ended, it had burned from Halls Cove to the western shores of Eagle Lake, Great Head by Sand Beach, and near Otter Point.

There is no question that from a human point of view the fire was tragic. But to the forest ecosystem, primarily dominated by red spruce and balsam fir, the flames brought important change. Through the scars of a blackened spruce forest came the birth of a diverse landscape. The wind-blown seeds from the catkins (dangling flower clusters) of white birch, gray birch, quaking aspen, and big-tooth aspen easily germinated in the full sun of the now exposed ground. This new habitat supported a variety of wildlife, from songbirds to deer to beaver.

As you gaze toward the mountains, look closely at the variation in the vegetation on the hillsides. The conifers' dark green hue contrasts against the hardwoods' bright green leaves, autumn colors, or bare branches. Can you detect what portion burned in 1947? As you travel the Park Loop Road, watch for changes in forest cover from deciduous woods to red spruce.

At mile 2.4, just after the overlook, is a turn-off to the left for State Route 233. Take a right on State Route 233 to access Northeast Harbor or the west side of the island; left turn leads to Bar Harbor. At mile 2.9 is the junction with the loop road. To the left is the one-way section of the loop heading toward Sieur de Monts Spring and Sand Beach; straight ahead is access to Cadillac Mountain Road and Jordan Pond.

PORCUPINE ISLANDS OVERLOOK

Passengers remain on bus.

Location

Mile 3.2 This overlook of Bar Harbor and Frenchman Bay provides a good view of the Porcupine Islands. Bald Porcupine is the island to the right with a steep south-facing cliff. To the left of Bald Porcupine are, from west to east, Bar Island, Sheep Porcupine, Burnt Porcupine, and Long Porcupine.

Parking

There are no designated bus parking spaces in the parallel pull-off. Because this is also the parking area for the North Ridge Trail of Cadillac, it is often full. It is best to slow down in the right hand lane and pause to enjoy the view.

Acadia is a national park composed primarily of islands. Schoodic Peninsula is the only mainland portion. The most obvious islands are Mount Desert and Isle au Haut, but numerous small islands, such as Bar Island, Bald Porcupine, and Sheep Porcupine are also part of the park. These islands provide important bald eagle nesting sites and perches. Bald Porcupine (whose name reflects a time when the island was cleared for livestock grazing) also hosts an important nesting site along its cliffs for black guillemots, a small black and white seabird related to puffins.

The lack of predators on many of the off-shore islands make them ideal for nesting seabirds and other wildlife. Harbor seals sun themselves and nurse their young along the island ledges. Porpoises and an occasional minke whale can be spotted among the island waters (best seen from boats). Many islands harbor rare and endangered plant species. Protection is vital to keep these fragile island habitats intact and undeveloped. In addition to agencies like the National Park Service, the Nature

Conservancy, Maine Audubon, and the Maine Heritage Trust, another road to preservation is one taken by private land owners—conservation easements.

These legal agreements are between a property owner and a conservation-oriented group like the ones mentioned above. The property owner relinquishes certain land rights to protect the land in perpetuity. Each easement is different, with guidelines established between the owner and the holding agency. An easement does not necessarily indicate access to visitors unless the owners consent. Acadia National Park is partnered with many private landowners to hold easements, several of which are Frenchman Bay islands. Easements are just one example of the park's legacy of land donation for the purpose of preservation.

PORCUPINE ISLANDS OVERLOOK TO GREAT MEADOW

No planned stops.

As you travel through this area that burned in 1947, you may wonder why a red spruce forest did not grow again. The forest today is primarily a birch and aspen forest with pockets of other hardwoods like red oak, sugar maple, and beech. Birch and aspen are able to populate areas after fire because: 1) seeds from the dangly catkins travel easily on the wind, 2) their seeds germinate quickly in full sun, and 3) they are fast growers. Will this forest remain primarily birch and aspen? As a general rule—probably not. Birch and aspen are short-lived trees, and the shade of this forest will limit their seed germination and sapling growth. Red spruce prefers shade for seed cones to germinate, and once having sprouted, the saplings are shade tolerant. This partially explains why red spruce didn't readily grow after the fire, even though seeds were present. Today, red spruce is scattered beneath the deciduous canopy, perhaps waiting its turn to dominate once again.

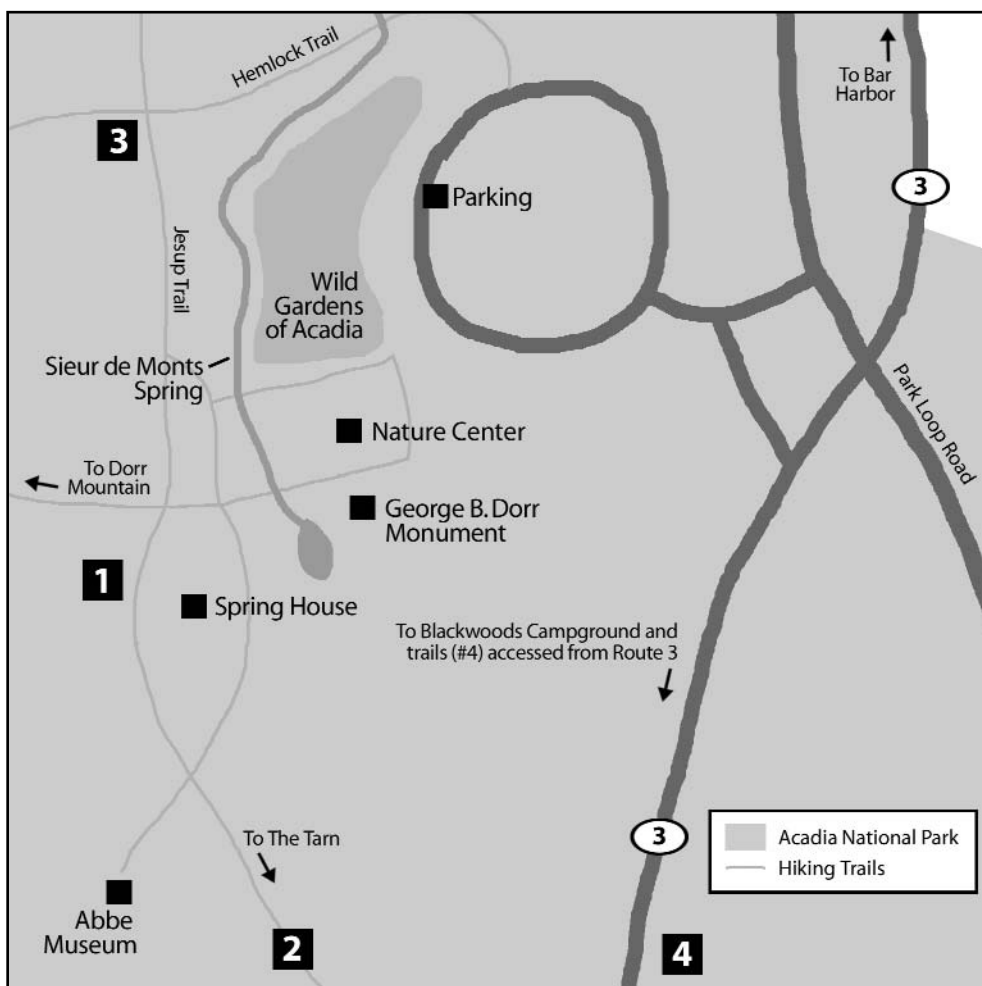
The forest opens up to the marshy Great Meadow, bordered by birch and aspen but filled with sedges, cattails, rhodora, alders, and winterberry. Diversity reigns in Acadia's fresh and salt water wetlands where a wide range of wildlife is supported and half of Maine's state-listed rare plants are found. Many wetlands help to purge water of pollutants and to recharge groundwater sources and reduce flooding by releasing water slowly.

Great Meadow is an exceptionally scenic location, flanked by two sets of mountains. Cadillac and Dorr Mountains rise to the right of the meadow. Huguenot Head and Champlain Mountain are to the left. Each of these mountain pairs are connected together by a notch formed during the last glacial retreat. As the ice sheet receded, a meltwater channel of raging water formed inside the ice, etching a deep notch in the granite ridges defining two individual mountain summits.

At mile 4.7 and mile 5.0 are turn-offs to the left which lead to Bar Harbor. Sieur de Monts Spring is reached at mile 5.6. Turn right, and then turn right again into the parking area for Sieur de Monts Spring area. If interested in accessing State Route 3 to Bar Harbor or Blackwoods Campground, do not turn into the parking area, but head straight instead. Turn right on State Route 3 for Blackwoods Campground; turn left for Bar Harbor.

SECTION TWO – PARK SITES

Chapter Six – Sieur de Monts Spring



1 Dorr Mountain East Face Trails

2 Tarn Trail (from Jesup Trail)

*With connections to Ladder Trail,
Kurt Diederich's Trail, Beachcroft Trail*

3 Hemlock Trail

*With connections to Strath-Eden Path,
Dorr Mountain North Ridge Trail, Gorge Path*

4 Dorr Mountain South Slope Trails

*Canon Brook Trail, A. Murray Young Trail,
Dorr South Ridge Trail*



Before You Go – What to Know Sieur de Monts Spring Logistics

LOCATION

Sieur de Monts Spring is located off the Park Loop Road, 5.6 miles from the visitor center. It is also accessed 3 miles outside of Bar Harbor, from State Route 3.

AREA HIGHLIGHTS

(LG/K) The Abbe Museum

A contemporary of George B. Dorr, the park's first superintendent, Dr. Robert Abbe, a surgeon from New York was fascinated by the history of the area's native people and their prehistoric ancestors. With the purchase of a collection of ancient stone tools, Abbe's amateur archeology hobby was sparked. His determination to collect the objects and stories of Maine's prehistoric and American Indians resulted in the building of the octagonal museum that today houses one of Maine's best archeological collections.

The museum is open mid-May to mid-October. Admission is \$2.00 for adults and .50 for children under 12. The Abbe Museum also operates a second museum in Bar Harbor that focuses on the Wabanaki people and their four tribes—the Penobscot, the Passamaquoddy, the Micmac, and the Maliseet. For information call (207) 288-3519.

(LG) The Wild Gardens of Acadia

A variety of park habitats from mountain summits to fresh meadows and shoreline to bogs are re-created here with the native plants of Acadia. A living field guide, the plants are labeled and serve as an outstanding educational resource to familiarize one with the native vegetation. The garden is operated by the Bar Harbor Garden Club in conjunction with Acadia National Park. Free. Open dawn-dusk.

(LG/K) Acadia National Park Nature Center

The Nature Center offers exhibits on the “science behind the scenery” of the park. Learn more about the important work of park biologists and researchers as they, armed with valuable information, protect park resources. In addition, the Nature Center offers an animal track matching game and taped frog calls (fun to listen to). The lawn outside the Nature Center is a good location to let children run. A small bookstore is available. Free. Open from mid-May to mid-September.

Ranger-led Programs

Several programs are offered at this location. Check the park newspaper, the *Beaver Log*, for information.

(K) Walks

For a pleasant walk in the area, the Jesup Path and Hemlock Trail (wide road section) combine to make an easy one mile roundtrip. Through birch forest to meadow to towering hemlocks, three different Acadia habitats can be enjoyed.

(LG) Sieur de Monts Spring Trail Guide

This guide explains the significance of sites at Sieur de Monts Spring. Guides are sold at the Nature Center. *1/4 mile/20 minutes. A copy of the text is in the appendix.*

Bird Watching

Deciduous woods, open meadows, coniferous forests, pond, and cliff-side habitats converge in the Sieur de Monts area, creating an ideal location for birding enthusiasts. Check the wildlife watchers notebook in the Nature Center to see what's been spotted or add your own observations. For more information on bird-watching, see the appendix.

TIME ALLOTMENT

If visiting all sites, expect to spend one hour.

- *Restrooms*: 10 minutes
- *Wild Gardens of Acadia*: 15 minutes
- *Nature Center*: 10 minutes
- *The Abbe Museum*: 20 minutes

PARKING

The Sieur de Mont Springs parking lot has approximately 80 diagonal spaces. It fills to capacity during the summer between the hours of 10am and 3pm. There is no parking on the side of the road leading into and exiting from the area.

FACILITIES

Restrooms are available off the parking lot.

ACCESSIBILITY

- Nature Center
- The Abbe Museum. You must drive to the accessible entrance at the back of the museum. The paved path from the Nature Center to the museum is fairly steep and not easy for wheelchairs.
- Most portions of the Wild Gardens, although some paths are narrow.
- The beginning of the Hemlock Trail is a primarily flat gravel road with a very slight rise and is suitable for wheelchairs.
- Restrooms

SAFETY

- The parking lot is extremely busy especially on July and August afternoons. *Please watch for vehicles.*
- People are sometimes confused when leaving the parking area as to which direction to head. Please be alert for drivers who change their mind quickly.

TRAILHEADS AND TRAILHEAD CONNECTIONS

NOTE: Not all of these listed trailheads are located right at Sieur de Monts Spring. However, many trails in the Dorr Mountain area connect with trails that do begin at Sieur de Monts Spring. Please check the hiking fact sheet in the Recreation section for descriptions and distances.

Dorr Mountain East Face Trails-

Trailheads behind Spring House from Jesup Trail

- *Dorr Mountain East Face Trail*
- *Kurt Diederich's Trail*
- *Tarn Trail*
- *Ladder Trail*

From Behind Nature Center

- *Jesup Path*

Dorr Mountain North Slope Trails-

Trailheads from the Hemlock Trail (Behind Wild Gardens)

- *Hemlock Trail*
- *Strath-Eden Path*
- *Dorr Mountain North Ridge Trail*
- *Gorge Path*

Dorr Mountain South Slope Trails-Trailheads and connections off Tarn Trail or off of State Route 3, .5 miles past the Tarn parking area (small pull-off on right hand side of road)

- *Canon Brook Trail*
- *A. Murray Young Trail*
- *Dorr South Ridge Trail*

Huguenot Head -Trailhead from Tarn Parking area on State Route 3

- *Beachcroft Trail*



At a Glance

Sieur de Monts Spring

SIGNIFICANCE

George Dorr, one of the founders of the park and its first superintendent, loved the tranquility of this spot. A small spring used historically by both American Indians and early settlers captivated Dorr here. He made a small depression in the ground for the spring waters to fill and then built the octagonal shelter over it. His landscaping efforts reflect a different view of nature at the time. Dorr's interest in the French history of this area inspired him to name the spring after the French explorer and nobleman, Pierre Dugua, Sieur de Mons.

FAST FACTS

- The name Sieur de Monts (a nobleman's title), is the correct French spelling. However, Pierre Dugua spelled his title "Sieur de Mons." Park historians prefer this spelling.
- Sieur de Monts National Monument, the original designation of the park in 1916, became Lafayette National Park in 1919 through an act of Congress. The park name was changed to Acadia in 1929.
- Over 70 bird species can be found in the Sieur de Monts area.

PROTECT YOUR PARK – HOW YOU CAN HELP

- When parking in the lot, please turn buses off so as not to distract other visitors.
- Please park in designated areas only. There is no parking allowed on the sides of the exiting road.
- Follow *Leave No Trace* principles.

HELPFUL INFORMATION – SIEUR DE MONTS SPRING

Fact Sheets:

Wildlife 3-3

Wildlife Research 3-8

Beaver 3-11

Peregrine Falcons 3-25

Amphibians 3-34

Plant Groups of Acadia National Park 3-43

Caring for Acadia's Native Plants 3-47

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Downeast and Downwind – Air Quality 3-85

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Appendix:

Birding on Mount Desert Island (B)

Common Plant Checklist for Acadia National Park (C)

Acadia National Park Timeline (E)

Who's Who at Acadia (E)

Sieur de Monts Trail Guide (H)



Background Information/Narrative Sieur de Monts Spring

BIRTH OF A PARK

GEORGE DORR AND THE FORMATION OF ACADIA NATIONAL PARK

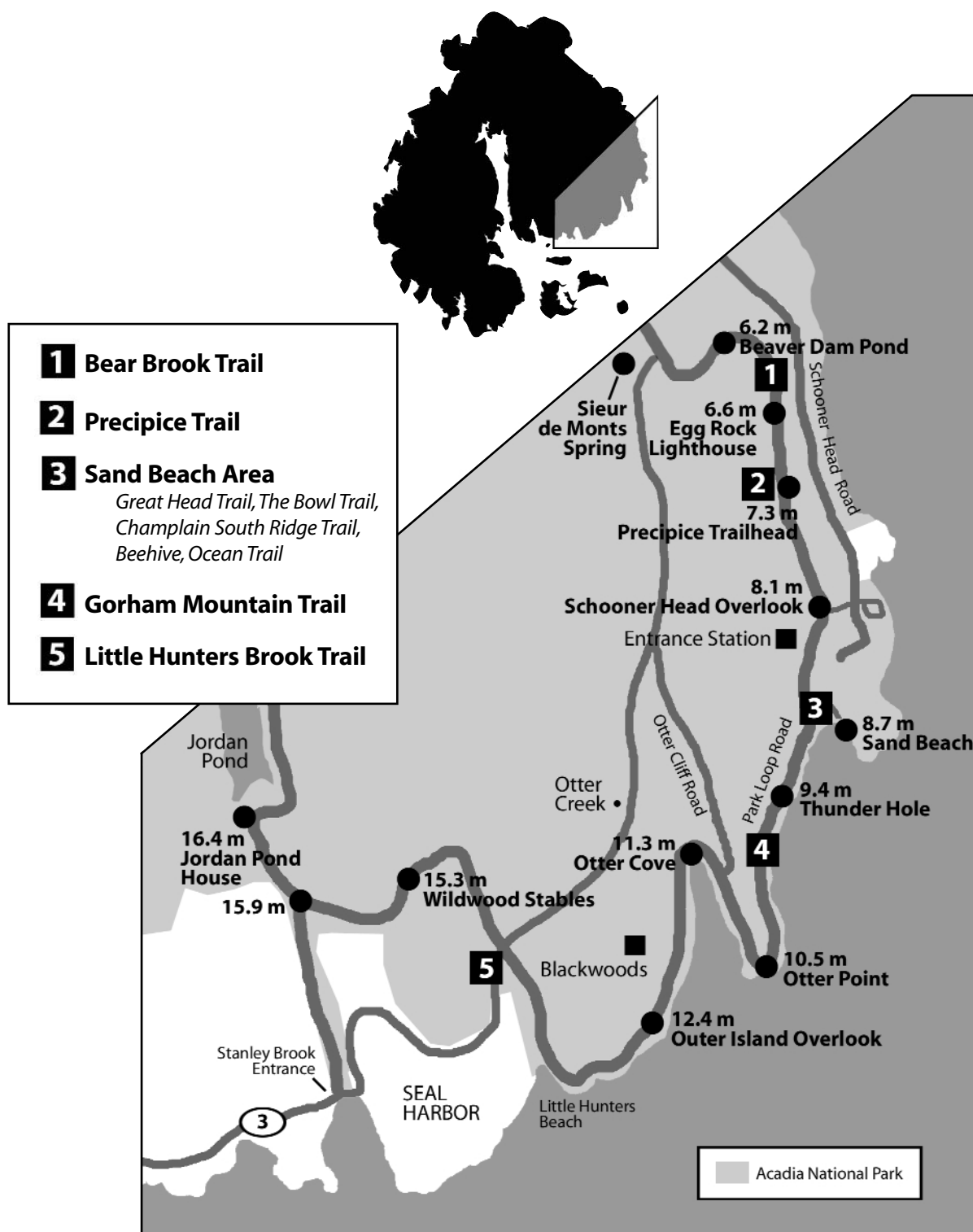
George Dorr was a member of the Hancock County Trustees of Public Reservations, an early 1900s organization of summer residents alarmed at the rate of development on Mount Desert Island. In response to their concern, through donation and the use of their own private funds, almost 6000 acres were in the trustee's possession by 1912. The eventual possibility of loss of their tax-exempt status coupled with the understanding of the intrinsic value of their land holdings, spurred Dorr to petition political players in Washington D.C. in 1913 to accept the lands as a national monument. Why a national monument and not a national park? An act of Congress is needed to make a national park while a national monument only needs the signature of the president. The latter choice offered a better probability of success and in 1916, President Woodrow Wilson created Sieur de Monts National Monument.

The original charter creating the park stated that the acquisition of lands would only occur through donation and not with federal funds. Two outcomes have since resulted. One, private landowners have demonstrated their love of Mount Desert Island and Acadia National Park through generous gifts of land. The approximately 48,000 acres that comprise Acadia are almost all from land donation. Second, land donations have given a jigsaw puzzle shape to the park boundary. In 1986 a permanent boundary was established for Acadia. Land parcels of significant importance to preserve were purchased with federal funds or traded for with park-owned land of lesser ecological value.

Dorr's work at Sieur de Monts Spring symbolizes the enthusiasm and the spirit of many early twentieth century summer residents who worked to preserve and protect the natural and historic values of Mount Desert Island. Today, Sieur de Monts Spring serves as a memorial to George Dorr for his work toward the creation of this national park and his direction of it from 1916-1944 as its first superintendent.

SECTION TWO – PARK SITES

Chapter Seven – Park Loop Road Sieur de Monts Spring to Jordan Pond





Before You Go – What to Know Park Loop Road (Sieur de Monts Spring to Jordan Pond) Logistics

LOCATION

This eleven-mile one-way section of road encompasses the exceptional scenery of Acadia's coastline before winding toward the island interior through towering spruce and pine spires. The popular sites of the Precipice, Sand Beach, Thunder Hole, Otter Cliffs, and Otter Point are located along this portion of the Park Loop Road. Access for the entire route is from the Park Loop Road or from 3 miles south of Bar Harbor on State Route 3 at Sieur de Monts Spring entrance; from Schooner Head Road in Bar Harbor to the left of Ocean Drive Dairy Bar (enters park at entrance station); or at Otter Cliffs Road, 4 miles south of Bar Harbor on State Route 3 (enters park at Otter Cliffs). Because the road is one-way these last two entrances will only take you to a portion of the drive.

AREA HIGHLIGHTS

Stopping points for opportunities to view or learn about two of Acadia National Park's animals—the beaver and peregrine falcon.

Beaver Dam Pond

Small pond with beaver lodge.

Precipice

Champlain Mountain's steep-sided cliff; home to peregrine falcons.

Ocean Scenery

- *Egg Rock Overlook*: Lighthouse view
- *Schooner Head Overlook*: Exceptional view of Frenchman Bay and coastline
- *Ocean Trail*: Level pathway paralleling the Park Loop Road for those preferring to walk
- *Sand Beach*: Wide expanse of broken shell and sand beach in Newport Cove
- *Thunder Hole*: Rocky chasm that thunders when surf is heavy
- *Otter Cliffs*: Scenic 90 foot cliffs along the ocean front
- *Otter Point*: Rocky coastline good for exploring

Wildwood Stables

Wildwood Stables provides historic horse and carriage tours along Acadia's scenic carriage roads daily from mid-June to early October. For more information call (207) 276-3622. Wildwood Stables also offers a horse camp for visitors wishing to bring their horses with them. No horseback riding is offered through Wildwood. Wildwood Stables is located on the Park Loop Road, one half mile south of the Jordan Pond House Restaurant.

TIME ALLOTMENT

Driving this eleven mile section of road takes 25 minutes. Expect to spend a minimum of an hour and a half with overlooks and one or two site specific stops. The following are suggested time spans for time required to get off bus, enjoy site, use restrooms if necessary, and re-board bus. Considerably more time can be spent at these locations if desired.

- *Precipice*: 10 minutes, if interested in learning about or watching peregrines
- *Sand Beach*: 45 minutes, depending on your group
- *Thunder Hole*: 20 minutes, depending on your group
- *Otter Point*: 30 minutes, if walking a portion of the Ocean Trail

PARKING

Parking is available in the right hand lane of the Park Loop Road and at specific parking areas mentioned in the background information/narrative section.

FACILITIES

- *Bear Brook Picnic Area*: Flush toilet, picnic tables, grills
- *Sand Beach*: Flush toilet, pay phones
- *Thunder Hole*: Vault toilet, small gift shop with film, snacks, souvenirs
- *Fabbri Picnic Area*: Flush toilet, picnic tables, grills
- *Otter Cliffs*: Portable toilet
- *Otter Point Parking*: Vault toilet
- *Wildwood Stables*: Flush toilet (not accessible)

ACCESSIBILITY

- Beaver Dam Pond, the Precipice, Schooner Head and other overlooks can all be viewed from a vehicle.
- Sand Beach view is accessible from the top of the stairs. There is no access to the beach.
- Thunder Hole has a viewing platform. There is no access all the way to the bottom of the stairs. Thunder Hole gift shop is not accessible.
- Sand Beach, Bear Brook, and Fabbri Picnic Areas have accessible restrooms.
- Carriage rides from Wildwood Stables are accessible with assistance. Restrooms are not accessible.

SAFETY

- Parking occurs in the right-hand lane of the Park Loop Road. Please be alert to parked cars, as well as cyclists maneuvering around them. This area is extremely congested in July and August.
- Please follow posted speed limits: 35 mph before entrance station; 25 mph between entrance station and Otter Point; 35 mph inland to Jordan Pond.
- Sand Beach and Thunder Hole are reached via a series of stairs (Thunder Hole also has a viewing ramp for wheelchair users). Please use handrails and watch your footing.
- Rocks around the intertidal zone are slippery. If exploring in these areas, wear appropriate shoes (good tread) and watch your footing.
- During storms, stay back from the water's edge. Waves are unpredictable and can knock you down.
- Poison ivy is found along the Ocean Trail in some sections.

TRAILHEADS AND TRAILHEAD CONNECTIONS

Bear Brook Picnic Area to Sand Beach

- *Bear Brook Trail (M)*
- *The Precipice (L)*

Sand Beach/Ocean Drive Area

- *Great Head Trail (M)*
- *The Bowl Trail (M)*
- *Champlain South Ridge Trail (M)*
- *Beehive (L)*
- *Ocean Trail (E)*
- *Gorham Mountain Trail (M)*
- *Cadillac Cliffs Trail (S)*

Otter Point to Jordan Pond

- *Ocean Trail (E)*
- *Hunter's Brook Trail (M)*



At a Glance

Sieur de Monts Spring to Jordan Pond

SIGNIFICANCE

Acadia National Park protects 41 miles of coastline, 25 percent of all the publicly owned shoreline in Maine. These miles of coast where the mountains meet the sea include rocky cliffs and tidepools, sand, boulder, and cobble beaches, and quiet coves. It is the ocean setting that this section of the Park Loop Road delivers. Almost any location along these rocky headlands displays majestic views of the classic Maine coastline. Park staff, through re-vegetation efforts, education programs, and resource protection signs try to meet the challenge of maintaining the coastal integrity of this popular and often congested park area.

The second half of the drive winds inland in the subdued quiet of a beautiful spruce forest typical of the eastern side of Acadia before the fire of 1947.

FAST FACTS

Wildlife

- Beavers, exterminated from Mount Desert Island due to trapping in the early 20th century were reintroduced by George B. Dorr in 1920.
- Peregrine falcons, once on the endangered species list, are small crow-sized raptors that can dive up to 100 mph after their songbird prey. They nest in Acadia today partly because of a successful reintroduction program.

Ocean

- Sand Beach's beautiful expanse of sand is more than meets the eye—it is mostly made from small shell fragments.
- Sand Beach's warmest water temperature is between 55 and 60 degrees in August. Brr! Despite the temperature, swimming is popular.
- The best time to try to hear Thunder Hole boom is two hours before high tide or during storms.
- Acadia's tidal range is eight to fourteen feet. Tidepools are characterized by five distinct zones named for their dominant animal or plant. From highest to lowest level: black (blue-green algae) zone, barnacle zone, rockweed zone, Irish moss zone, kelp zone.

Natural History

- The fire of 1947 burned over Great Head, but blew out to sea before engulfing the area between Otter Cliffs and Otter Point. The forest area to the south of Gorham Mountain did not burn, and remains primarily spruce.
- An example of the shoreline after the glaciers receded 12,500 years ago can be found at an elevation of 240 feet along the Cadillac Cliffs trail off of the Gorham Mountain trail.

History

- Locations bearing the name “otter” are most likely named for river otters. There are no sea otters in this region.
- During World War I, a strategically important naval radio station operated from Otter Point. It was moved to Schoodic Peninsula to allow for the continuation of the Park Loop Road.

PROTECT YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- Do not feed wildlife. This includes sea gulls. Feeding only exacerbates the problem of wildlife depending on humans to feed them.
- At Sand Beach, please remain off the sand dunes. They are fragile. Dogs are not allowed on the beach.
- Picnics are popular all along the shoreline. Please remember to take all trash out with you, even orange peels, apple cores, peanut shells, etc. They are inappropriate for wildlife to eat and look unsightly.
- This section of the Park Loop Road is extremely congested, especially in July and August. If possible, try the *Island Explorer* shuttle bus and leave your vehicle behind or visit this section in the early morning or late afternoon.
- If visiting tidepools, use extreme caution with the plants and animals. Please respect their fragile nature by choosing to observe their mysterious world, and not removing them from their homes.
- Please leave everything as you find it in the park. There is no collecting.

HELPFUL INFORMATION

PARK LOOP ROAD (SIEUR DE MONTS SPRING TO JORDAN POND)

Sieur de Monts Spring to Sand Beach

Fact Sheets:

Wildlife 3-3
Keeping Wildlife Wild 3-6
Wildlife Research 3-8
Beaver 3-11
Peregrine Falcons 3-25
Plant Groups of Acadia National Park 3-43
Caring for Acadia's Native Plants 3-47
Acadia's Common Plants 3-50
Geology 3-66

Appendix:

Endangered Wildlife Categories in State of Maine (B)
Glacial Geology (D)
Mountains (D)
Lighthouses (F)

Sand Beach to Otter Point

Fact Sheets:

Geographic Features 3-63
Life Between the Tides 3-71
Suggestions for a Low Impact Visit to the Shore 3-76
Intertidal Animals 3-77
Intertidal Plants 3-79

Otter Point to Jordan Pond

Fact Sheets:

Seabirds 3-32
Portrait of Three 19th Century Families 3-116



Background Information/Narrative Sieur de Monts Spring to Sand Beach

Note: Narratives/Background Information for this section of the Park Loop Road are divided into three sections: 1) Sieur de Monts Spring to Sand Beach 2) Sand Beach to Otter Point and 3) Otter Point to Jordan Pond. Mileage taken from visitor center.

Just after Sieur de Monts Spring at mile 6.1 is Bear Brook Picnic Area. Located in a wooded area with surrounding rocky outcroppings, picnic tables, grills, and restrooms are available.

BEAVER DAM POND

Passengers remain on bus.

Location

Mile 6.2 Beyond the picnic area, on the right hand side of the road, the forest opens to Beaver Dam Pond, a lovely pool silhouetted by a birch and aspen-covered hillside.

Parking

There are no specified parking spaces. You may stop in the right hand lane of the Park Loop Road to view the pond.

Look to the northern end of the pond to spy a beaver lodge. A well-constructed dome of sticks and mud, the lodge is hollowed by the beaver chewing through the interior. The lodge has underwater entrances and is nicely appointed with two levels, one for sleeping and the other, for use like a mud room. Beavers are one of the few species that manipulate the environment around them to create a new habitat. A stream that can be dammed or a pond surrounded by their favorite trees, aspen and birch, is ideal habitat for the beaver.

The watchful eye of a patient observer at dawn or dusk may be rewarded by a glimpse of these fascinating creatures. Not so likely in the early 1900s however. Primarily due to fur trapping, beavers had been eliminated from Mount Desert Island. George B. Dorr, the first superintendent, reintroduced two pairs to the island.

Beaver Dam Pond is an area of concern for park managers. Purple loosestrife, a showy purple flowering perennial, is an exotic plant species that is invading the pond's shrubby margins. Purple loosestrife's native lands are in Europe, along with its natural environmental controls that keep it from being so invasive. If left uncontrolled, the plant could eventually displace the pond's native vegetation that

wildlife rely on. A management program to control this non-native plant was put into play to protect this wetland habitat.

Many examples of conservation and protection, like the reintroduction of native species can be found in the Acadia area. The next two sites ahead, the vista to Frenchman Bay and Egg Rock Lighthouse, and the Precipice, illustrate two important events in the protection of wildlife.

As you drive away from Beaver Dam Pond, Jackson Laboratory, the world-renowned research facility in genetics and mice breeding for research is visible along the park's eastern boundary with Bar Harbor. At mile 6.4 is the trailhead for Bear Brook Trail that climbs Champlain Mountain's northern ridge.

EGG ROCK LIGHTHOUSE OVERLOOK

Passengers can remain on bus.

Location

Mile 6.6

Parking

No specified parking spaces. Pull-off for parallel parking for approximately 8 vehicles.

NOTE: Interpretive sign

As the road climbs, views of Frenchman Bay, Egg Rock Lighthouse, Schoodic Peninsula and the indented Acadia coast open. Schoodic Peninsula is another part of Acadia National Park. The 2266 acre parcel is a one hour drive from Mount Desert Island to the north. It is next to the town of Winter Harbor. Egg Rock, the island with a small lighthouse, is visible between Schoodic Peninsula and Mount Desert Island. The lighthouse was built in 1875, but now is completely automated like all Maine lighthouses.

Many ledges and islands off the Maine coast carry the name of Egg Rock, bearing the history of seabird egg collection by fishermen in the late 1800s and early 1900s. This activity, combined with the millinery trade and hunting, threatened seabird survival. Common seabirds of today, like the eider duck and the herring gull, were almost exterminated. Some, like the great auk, a flightless seabird, disappeared altogether. One of the first conservation acts in this country was the legal protection of seabirds. The Audubon Society became the first private conservation organization formed in response. At Egg Rock, lighthouse keepers became the frontline

protectors of these birds. These protective conservation efforts allowed for the re-establishment of these species.

As the road descends, the large estate along the shore is the Highseas Estate, built in 1912. It stands as a symbolic remnant having survived the fire of 1947 which raged around it. Protective efforts saved it from the flames. Today, it serves as summer housing for Jackson Lab employees.

(LG/K) THE PEREGRINE AND THE PRECIPICE

Appropriate for passengers to get off bus if viewing of peregrine site is desired.

Location

Mile 7.3

Parking

The parking lot offers some parallel parking for buses and approximately 25 diagonal spaces. Parking is available on the right hand side of the Park Loop Road as well.

NOTE: During the late spring and early summer, if peregrines are nesting, visitors may have a chance to spy them with the help of a park ranger. Spotting scopes and informal interpretation are available in the parking lot to help visitors learn more about these incredible birds.

Looming along the western edge of the Park Loop Road is the steep face of Champlain Mountain and the cliff-hugging trail, the Precipice. A favorite trail of many visitors, hikers must wait for the trail to open each summer, usually toward the end of July, after peregrine falcons have nested.

Peregrine falcons are impressive raptors, able to hit songbirds, their primary food, in mid-flight, knocking them to the ground. Widespread DDT use in the 1950s and 1960s caused residual effects as DDT accumulated within the food chain, eventually affecting all birds of prey. DDT reduced calcium production for thick egg shells, causing them to break easily. Reproduction rates dropped dramatically. By the end of the 1960s, peregrines were completely gone from east of the Mississippi.

Historically, Acadia had two nesting sites of peregrine falcons, but by 1962, they had disappeared from Acadia's skies. A successful reintroduction program returned these birds to Acadia once again. From 1984 until 1986 Acadia worked in cooperation with Cornell University and the Peregrine Fund in Boise, Idaho as part of a nationwide effort to restore these magnificent birds to their rightful habitats.

Hand-reared in a Cornell University lab for about a month, the chicks were transferred to a cliff-face on Penobscot Mountain and placed in a specially equipped box. This method of reintroduction is called hacking.

22 of the 23 chicks hacked successfully took flight. In 1987, an adult peregrine appeared, and the project ended. Monitoring began of the cliff where this one returning peregrine seemed to favor, the Precipice on Champlain Mountain. Today, peregrines nest at the Precipice as well as other Acadia mountains.

Reintroductions are a last act of hope to protect a species. The beaver, as mentioned before, and the peregrine have returned to their natural habitat because of reintroduction efforts. Protection of seabirds in the early 1900s helped to halt their demise. Protection of critical habitat before animal populations drop drastically is always a much better option, and one of the important reasons for places like national parks.

SCHOONER HEAD OVERLOOK

Passengers can remain on bus.

Location

Mile 8.1 Just before the entrance station is a turn-off to the left for Schooner Head Overlook. The overlook is 3/10 of a mile. Watch for signs. A return to Bar Harbor on the Schooner Head Road is also an option.

Parking

Circular parking lot with approximately 30 diagonal spaces.

NOTE: Interpretive sign

The overlook views a rocky promontory and Frenchman Bay islands. A large seasonal home sits on the edge of this peninsula - a reminder of the importance of Acadia's boundary legislation.

One of the values that most visitors come to cherish in a national park are outstanding scenic views. At one time the view from the overlook was undeveloped shoreline. Because of Acadia's jigsaw shape boundary, the view was not in public hands, but privately owned. The private landowner, certainly within his rights, built the massive seasonal home, forever altering the view of Maine's wild coastline.

Although the jigsaw-shaped boundary of the park meant some ecologically or scenically significant lands were not protected, it also symbolizes the generosity of private landowners who have donated land parcels to the American people to form this national park. The reason for the peculiar park boundary was Acadia's original charter which stated that only land donations would create this small national park, not federal funds. Today, Acadia National Park has worked with local communities and private landowners to create a final permanent park boundary focusing on the protection of critical areas.

Looking to the northwest, the full line of Champlain Mountain's ridge is visible. Most of Acadia's mountains are made from a coarse-grained pink granite. Granite is an intrusive (beneath the earth) igneous rock. As in all intrusive igneous rocks, granite is "born of fire" and formed from magma beneath the surface of the Earth. Magma is a molten rock composed of a mixture of liquid chemical compounds, dissolved gases, and some solids. Perhaps as many as 420 million years ago, a huge molasses-like plug formed miles beneath the surface in the Acadia area we know today. This magma reservoir worked its way up from the mantle of the Earth, displacing the overlying bedrock. It cooled slowly, crystallizing into large grains of feldspar (pink), quartz (white), and hornblende (black), forming the coarse-grained granite known to anyone hiking Acadia's summits. Eons of erosion stripped the other bedrock layers away, eventually exposing the granite.

Return to Park Loop Road or turn right down Schooner Head Road back to Bar Harbor.

Entrance Station

At mile 8.1 is the entrance station. Entrance fees paid at the entrance station return to the National Park Service for specific projects. Information on entrance fees can be found on page 1-36.



Background Information/Narrative

Sand Beach to Otter Point

(LG/K) SAND BEACH

Appropriate for passengers to get off bus.

Location

Mile 8.7 Sand Beach is approximately a half mile from the entrance station. Turn left into the main parking lot. The beach is not visible from the parking lot, but can be seen from the top of the stairs leading to the beach.

Parking

Sand Beach has two parking lots. The lower one is large (approximately 150 spaces) but fills to capacity in July and August. The upper lot is small with 25 parking spaces and is used for those interested in walking the Ocean Trail or hiking the Beehive.

Parking on the right hand side of the Park Loop Road is also possible if both lots are full. Signs are usually posted if that is the case.

NOTE: Interpretive sign at top of stairs.

The first view of Sand Beach captivates many visitors, whether it is in sparkling sunshine, bathed in fog, or awash with crashing waves. Sand Beach is well known for its sunbathers and cold water temperatures, but it has other reasons to be recognized as well.

Since eons of erosion are needed to whittle away at the shoreline's crooked rockbound character, this pocket beach is a rarity along Maine's geologically young coast. Sand Beach is nestled in Newport Cove, partially enclosed by the arm of Great Head to the east, Old Soaker (rock ledge in cove) to the south, and the cliffs of Ocean Drive to the west. The beach's shallow slope and relatively quiet waters allow for the deposition of fine sediment material diverted into the cove by Great Head and Old Soaker.

A close look at a handful of sand reveals blues, greens, creams, purples, and pinks. Up to 70 percent of the sand mixture is broken shells from intertidal creatures like mussels, sea urchins, barnacles, and periwinkles. Feldspar and quartz from the local granite bedrock add pink and white hues. The shell content primarily originates from juvenile intertidal creatures that start their life along the beach's exposed rockbound edges. The seasonal loss and accretion of sand exposes rock one season only to cover it with sand the next, burying tide pool creatures. Their broken shells are eventually deposited back onto Sand Beach.

This seasonal sand variation due to wave action is also evidenced in the sporadic unveiling of a wrecked schooner beneath the sand. In 1911, the Schooner *Tay* ran aground on Old Soaker, coming to rest on Sand Beach. Over time its deteriorated hull was covered by sand, but on occasion, the schooner's remaining ribs have re-surfaced.

The sand dunes behind the beach are another feature. Fenced off to protect their fragile nature, they are considered ecologically significant due to the scarcity of such dunes along the Maine coast. The botanically exceptional stand of American beach grass associated with the dunes is critical for stabilizing the shifting sands.

In the distance behind Sand Beach, the profile of the Beehive looms to the north. Look closely for hikers on the cliffside, easily dwarfed by the mountain wall. This trail is a favorite hike for many and serves as a good introduction to the Precipice Trail, a longer and more strenuous hike. Like the Precipice, the Beehive trail has metal rungs embedded in the granite for climbing and small metal bridges to cross chasms. These steep southern cliffs were sculpted by glacial plucking, a process where fingers of ice tore rocks from mountain slopes as the ice sheet advanced southward.

Option: The Ocean Trail, beginning from the upper lot of Sand Beach, is a two mile walk that parallels the Park Loop Road. If desired, passengers can walk along any portion of it. As an example, passengers wishing to walk could meet the bus at Thunder Hole.

SAND BEACH TO THUNDER HOLE

No planned stops.

After Sand Beach, views along the Park Loop Road open to the breathtaking interface between land and sea that defines Acadia for many visitors. In 1930, as part of the on-going construction of park roads, this section of the Park Loop Road was reconstructed and extended to Otter Point. The original road from Sand Beach to Otter Cliffs was built in 1886. It followed a favorite walking route of rusticators and cottagers who reveled in the shoreline sites. A popular excursion in the mid-to late 1800s was to Thunder Hole.

(LG/K) THUNDER HOLE

Appropriate for passengers to get off bus.

Location

Mile 9.4 Across from Thunder Hole Gift Shop

Parking

There is a small parking lot (approximately 30 spaces) at the gift shop. Many people choose to park in the right hand lane of the Park Loop Road.

Thunder Hole often elicits only a sloshing gurgle, but under appropriate conditions, it does indeed bellow. When ocean waves slap against this narrow chasm, air becomes trapped deep in its chamber. When released, a booming sound results from the once-trapped air. The best time to see Thunder Hole is at mid-tide rising or during ocean storms, when its thunderous rumble is accompanied by plumes of ocean spray. During such storms, the steps to Thunder Hole are closed, although its booming and resulting spray can be seen and heard from a distance. Waves can be unpredictable and visitors should take appropriate precautions.

Of the 2500 miles of coastline in Maine, only 150 miles are protected. Twenty-five percent of those are found at Acadia National Park. Considering the congestion that this section of the park experiences, especially in July and August, protection is challenging here. Millions of visitors plus vehicle exhaust add more stress to the plants and animals already living along the island's edge. Riding the *Island Explorer* bus instead of using individual vehicles is one answer to the congestion and exhaust problem. Visitor compliance to remain on trails lessens erosion and the impact of visitation on fragile plant communities living on granite ledges.

THUNDER HOLE TO OTTER CLIFFS

No planned stops.

The rocky shoreline can be an inhospitable environment for many plants. Thin soil, rapid run-off, strong winds, exposure, salt water spray, and minimal fresh water are natural stresses that coastal species must contend with. Those plants that do live here are well adapted to the difficult conditions. White spruce, which prefers cool coastal temperatures, has a shallow root system that can spread over rocky ledges. Bayberry's thick waxy leaves help to conserve moisture. The non-native rugosa rose can spread quickly by shallow underground root runners. This rose was introduced to help stabilize seaside soils in southern New England and the mid-Atlantic centuries ago.

- *Mile 9.7:* Gorham Mountain Parking Area (15 spaces)
- *Mile 9.8:* This small unmarked parking lot (20 spaces) is a good location to park so your group can walk along the Ocean Trail and linger over the ocean view.
- *Mile 9.9:* To the right is Otter Cliffs Road. Fabbri Picnic Area is 2/10 of a mile on this road. Fabbri has restrooms, picnic tables, and grills. If continuing on Otter Cliffs Road, it will lead to State Route 3. A left turn on State Route 3 leads to the town of Otter Creek and Blackwoods Campground; a right turn leads back to Bar Harbor.

OTTER CLIFFS

Passengers can remain on bus, although there is parking for those interested in enjoying the ocean view a bit longer.

Location

Mile 10.1

Parking

There is a small 15 space lot to the right before the Park Loop Road splits into a two-tiered road. There is no parking on the split road, as there is no way for vehicles to pass.

The Park Loop Road rises slightly above Otter Cliffs and offers panoramic ocean views giving one a sense of the expansive ocean horizon. From Otter Cliffs to Jordan Pond, the character of the forest changes from the deciduous woods of the first half of the Park Loop Road. This is now mostly a red spruce-balsam fir forest typical of Mount Desert Island forests before the 1947 fire.

Otter Cliffs is a popular location for rock-climbing. Many sites along this section of shore are named for otters—Otter Cliffs, Otter Point, Otter Cove, and Otter Creek. Such names associated with coastline landmarks give the impression that sea otters are here. They are not! River otters, however, are native.

(K) OTTER POINT

Passengers can get off bus and walk across the Park Loop Road to the Ocean Trail.

Location

Mile 10.5 Otter Point is not one specific place but an area along the shore. The Ocean Trail ends (or begins here, depending on your perspective).

Parking

There is a lot with approximately 50 diagonal parking spaces.

As the deciduous woods of the Park Loop Road's first half are in contrast to the spruce-fir forest traveled through now, so is Otter Point's jumbled looking coastline in contrast to the beautiful pink coarse-grained granite. This convoluted rusty-appearing rock is aptly called the shatter zone. It can be found encircling the mountains, and marks the contact zone where the hot magma plug and the overlying cold bedrock met beneath the surface of the Earth some 420 million years ago.

This severely shattered and fractured rock is up to a mile wide in some areas. Angular blocks of rock fragments can be found embedded in the solidified granitic mix. The rusty color comes from iron oxide as well as other mineral depositions.

Tidepools though, are perhaps the most amazing aspect of the shore. These pools form in rock depressions and harbor a remarkable array of plants and animals. The tide creates habitats where organisms have adapted to a variety of conditions that can occur all within a few feet of each other. Twice daily, the rise and fall of the tide leaves these intertidal organisms exposed or submerged. Depending on their specific tolerance of exposure, "zones" have formed, named for their dominant species.

The upper-most level is dominated by blue-green algae. Called the black zone, this is only submerged during the highest of tides. Small, volcano shaped barnacles bunch together giving the zone beneath the black zone a stripe of whitish color. Blue mussels and periwinkles are also found in the barnacle zone. Forests of rockweeds, create the greenish rockweed zone in the middle level of the tidepool. These stringy seaweeds hide many creatures beneath their tangled blades. The rockweed zone is also home to dog whelks and green crabs. Beneath the rockweeds is another zone characterized by a seaweed. The Irish moss zone is dominated by a short, frilly red seaweed. Many other seaweeds such as sea lettuce, nori, and purple laver are found here. The bottom level of the tidepool is rarely exposed to air. The kelp zone holds long-bladed seaweeds that cover sea stars, sea cucumbers, and sea urchins.

This diurnal fluctuation of the ocean obviously plays a critical role in determining who lives where along the coast. Tides are the result of the movement of water due to the gravitational attraction between the Earth, Sun, and Moon. A slight bulge forms in the ocean as each locality on the Earth rotates through the Moon's gravitational pull. The centrifugal force of the Earth's rotation creates another bulge on the opposite side of the Earth. Where the bulges occur, it is high tide; where the water is "flattened out," it is low tide. Because the Moon revolves around the Earth in a 28 day cycle, the tides change by 50 minutes each day. The Sun's gravitational pull has an effect on tides as well, although not as pronounced as the Moon's.



Background Information/Narrative

Otter Point to Jordan Pond

To the left, at mile 11 is the Fabbri Memorial, in honor of the important naval radio station that operated from this site during WWI through the early 1930s. To the right is another entrance to Fabbri Picnic Area. From the picnic area you can take Otter Cliffs Road to State Route 3.

OTTER POINT TO OTTER COVE

No planned stops.

Beyond Otter Point the Fabbri Picnic Area is accessible again. During WWI, a strategically important naval radio station operated from this location to receive signals from the European front. In the 1930s, although still vital to U.S. military efforts, it also represented an obstacle in the proposed continuation of the Park Loop Road through this scenic portion of Mount Desert Island. In 1932, a solution was reached and the United States Navy and Department of the Interior agreed that the park, which now owned Schoodic Peninsula, would offer land for the relocation of the naval station. John D. Rockefeller, Jr., still involved in the Park Loop Road development, contributed funds for the re-establishment of the naval station.

After Otter Point, the road winds over a causeway in quiet Otter Cove. To the right, Cadillac and Dorr Mountains rise in the background. From this viewpoint, they appear as one mountain with a notch cut out of the ridge. This is a meltwater channel, a glacial feature where a raging river ran beneath the retreating ice, gouging the rock to form two separate mountains. Back at Great Meadow, the same feature was viewed from a different angle.

FROM OTTER COVE (MILE 11.3) TO OUTER ISLAND VIEWING OVERLOOK (MILE 12.4)

No planned stops.

Many things fascinate visitors about the Maine coast. Lobster boats and lobster buoys often catch the visitors' eye out on the ocean. Each lobsterman owns his own traps, boat, and distinctive buoys with shape and color combination selected by the individual. The buoys mark where the lobster traps are on the ocean floor. Besides lobster buoys, bobbing in the ocean are large sea ducks—the common eider. In the early summer, the mottled brown females can be seen gathered in small groups with a clutch of ducklings. Toward summer's end, the black and white males make an impressive sight when they gather in large rafts, often numbering in the hundreds.

BAKER ISLAND AND LITTLE CRANBERRY ISLAND VIEW

Passengers can remain on bus.

Location

Mile 12.4 Three pull-offs with views out to sea and back toward the coast around Otter Point. Of the three pull-offs, the best outer island view is from the third one.

Parking

Parallel parking is available.

The outer islands viewed from here include Baker Island, furthest to the east, and Little Cranberry Island, lying just to the west. In the far distance is Great Cranberry. Bunker's Ledge, indicated by a small white pyramidal monument, lies in the front.

While looking at these islands today, one may feel a sense of isolation, or perceived detachment, from the rest of the world (or at least from interstates and movie theaters!) But 150 years ago, islanders knew that quite the opposite was true. Islands were prime real estate then, but not because of their scenic views. Lying closer to the sail transportation of the day and important shipping routes, islands were the prime location for distributing lumber, granite, fish, ice, feathers, and other commodities to all corners of the globe. During the 1800s, island communities like the Cranberry Isles helped to provide food and other items to growing cities such as Boston, New York, and Philadelphia. These ordinary, everyday people were the backbone of a developing nation and therefore very important to its history. On Little Cranberry Island, the Islesford Historical Museum, another part of Acadia National Park, preserves stories of these maritime Mainers.

Today Baker Island is also a part of Acadia National Park, but in the early 1800s, William and Hannah Gilley with their three young children rowed from Southwest Harbor to claim, not purchase, Baker Island for their home. Nine more children would come along, reveling in the forests and shores of this beautiful Maine island. The United States government built a lighthouse on Baker in 1828, and William became the first lighthouse keeper, keeping his family in all the whale oil they could use.

Some of William and Hannah's children remained on Baker while some left to live on Mount Desert Island or other islands. Other families eventually came to live on Baker as well and at one time the island had a sizeable population. A small cemetery on the island gives pause to picture life on this magical island.

Today the lighthouse is automated and almost all the land is part of Acadia. A few buildings remain and two homes are privately owned. With Baker Island's fields of lupine and rugosa rose, its wild storm beach on its southern side and its outstanding view of Mount Desert Island, it is a special destination for park visitors with boat access.

BAKER AND LITTLE CRANBERRY ISLAND VIEW (MILE 13.2) TO WILDWOOD STABLES

No planned stops.

At mile 12.9 is a steep staircase that leads down to Little Hunter's Beach, a very different type of beach filled with spherical cobbles and boulders framed by cliffs. Where the sea breaks apart rock and removes it, it also deposits it in the form of fine sediments, gravel, cobbles, and boulders. Many of these rocks broke from the surrounding cliffs, their jagged edges eventually smoothed and rounded by constant tumbling in the ocean waves only to be deposited in this sloping shoreline pocket.

NOTE: Little Hunter's Beach cannot be seen from the Park Loop Road. You must descend the stairs to reach the site. There is not an official parking area—only a pull-out for 2 or 3 vehicles.

Before dropping into the spruce woods, a pull-off at mile 13.2 affords a final glimpse of Little Cranberry Island, Sutton's Island, and Great Cranberry Island. The homes jutting out along Mount Desert Island's rocky coast are in the town of Seal Harbor.

The road now leaves ocean views behind and winds through inland forests of red spruce and balsam fir. This spruce-fir forest is perhaps similar to the one that burned in the fire of 1947 and is typical of Maine forests in much of the northern sections of the state. Red spruce and balsam fir can be distinguished easily from each other by their needles. Red spruce has "spiky" needles; balsam fir has "flat, friendly" needles. Although associated together, red spruce is the dominant species.

Along this section of the Park Loop Road, the red spruce trees tower above a forest floor that is almost void of other vegetation. A spruce forest is a world of stillness, dampness, dense shade, and low diversity. Its acidic soil lacks many nutrients and thick needle-covered branches block the sun from reaching the forest floor. These ecological conditions combine to make an uninviting environment for most other species to live. Shallow-rooted trees, the red spruce is susceptible to blow downs, creating a domino effect as one spruce tree knocks over another.

One of the more common animals found in a spruce forest are red squirrels. The remains of shredded red spruce cones, a favorite food of the red squirrel, litter the base of many trees. Like all park wildlife, they should not be fed by park visitors. Visitors who feel obligated to feed animals like chipmunks, red fox, red squirrels, and seagulls only create nuisance animals in the long-run. The end result is the demise of the animal because of its growing dependence on people to feed them.

At mile 14.1, Hunters Brook Trail follows a stream through spruce woods eventually connecting with the Pond Trail and the Triad.

WILDWOOD STABLES (MILE 15.3) TO JORDAN POND

No planned stops.

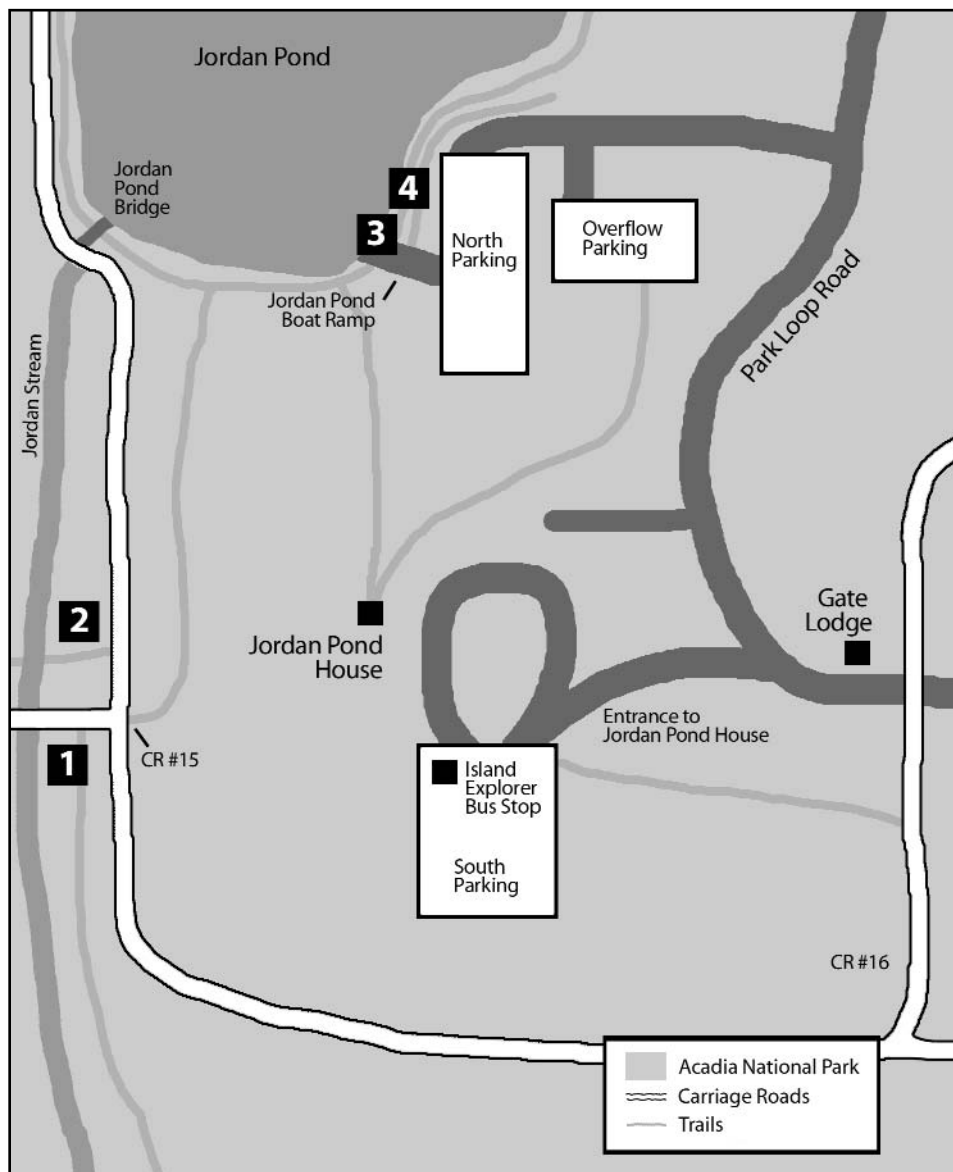
Visitors can turn a page of history riding buckboard carriages along the carriage roads. At one time, buckboards similar to those used by Wildwood Stables transported rusticators from one scenic spot to another in the 1800s. The tradition continues today, as trips take visitors to the top of Day Mountain, to the Cobblestone Bridge, or for tea and popovers at Jordan Pond.

At mile 15.9, the Park Loop Road becomes two-way at the junction with the Stanley Brook Road. Stanley Brook Road is 1.2 miles long and leads to State Route 3 in Seal Harbor at the Seal Harbor beach. There is a three-arch carriage road bridge spanning the Stanley Brook Road that has a low clearance of 10.9 feet. This road is not recommended for buses.

A sharp left leads to a quiet residential area of Seal Harbor, while continuing straight ahead on the Park Loop Road leads to Jordan Pond. There is one more opportunity to access Wildwood Stables here as well. A dirt road on the right hand side of the road leads back to the stables. At mile 16.3 is the Jordan Pond Gatelodge, a private residence. At mile 16.4 is the Jordan Pond Tea House.

SECTION TWO – PARK SITES

Chapter Eight – Jordan Pond



- 1** Jordan Stream Trail
- 2** Asticou Trail
Sargent Mountain Trail
- 3** Jordan Pond Trail
- 4** Jordan Pond Nature Trail



Before You Go – What to Know Jordan Pond Logistics

LOCATION

Mile 16.4 Jordan Pond is off the two-way section of the Park Loop Road. It can also be accessed from the Stanley Brook Road entrance in Seal Harbor (this has a bridge with a low clearance and is not recommended for tour buses). Winter access is only from Seal Harbor on the Jordan Pond Road (past the Seal Harbor fire station).

NOTE: The “classic” Jordan Pond view of the Bubbles can only be seen by walking behind the tea house or down the boat ramp.

AREA HIGHLIGHTS

(LG) Jordan Pond House and Gift Shop

The Jordan Pond House serves both lunch and dinner as well as tea and popovers. This tradition is over 100 years old! Seating can be on the lawn, covered porch, or in the restaurant. Reservations are important (276-3316), especially in the afternoon for tea and popovers where waits of up to one and a half hours are not unusual. Visitors bringing their own lunch can eat upstairs on the deck (chairs and tables provided) or on the lawn in front of the restaurant’s outdoor seating. The gift shop sells numerous books and guides, clothing, and souvenirs, as well as snacks upstairs.

(K) Jordan Pond Nature Trail

The Jordan Pond Nature Trail is a half mile loop trail through the woods and along Jordan Pond’s edge. The trail begins off the road leading to the boat ramp. The guide is stocked in a trailhead box 30 feet down the trail, or is for sale at the gift shop or park information centers (text included in the appendix).

Jordan Pond Gate Lodge

Built in 1932, the gate lodge consists of a carriage house connected to the gatekeeper’s residence and a gate attached via a masonry fence to prevent automobiles from turning on to the carriage roads. Timbers are from cypress and the roof is covered with a crudely made French shingle tile in shades of brown, red, and black, similar to terra cotta. The shutters have the letter “A” for Grosvenor Atterbury, the architect of the gate lodge. One of Rockefeller’s engineers, Paul Simpson lived here in Jordan Pond Gate Lodge in the 1930s. It is now a park residence and not open to the public.

(LG/K) Carriage Roads

Although the Jordan Pond area provides good access to the carriage road system, some of the carriage roads to the south of Jordan Pond are on private property and off-limits to bicyclists (but not horses or walkers). Both bikers and walkers should bring a Carriage Road Users Map or guide book (available at park information centers). Posted numbers at road intersections correspond to maps in carriage road guides. Check carriage road guides for specific closure areas. Carriage road excursions in addition to the one described below can be found in the Recreation section “Biking” on page 4-14.

(LG/K) Around Jordan Pond House

Carriage road explorers can seek out three stone-faced bridges: the Cobblestone Bridge along Jordan Stream, the Jordan Pond Bridge, and the West Branch Bridge (on carriage road leading west toward Brown Mountain). The Jordan Pond Bridge is the most accessible from the Jordan Pond House, located at the southern end of the pond. The Cobblestone Bridge, spanning Jordan Stream, is a half mile to the south of Jordan Pond House. It is the only bridge faced with rounded stones rather than cut granite. The West Branch Bridge, half mile to the north, on the carriage road leading westward towards the Amphitheater, has a narrow gothic arch.

TIME ALLOTMENT

At a minimum, expect to spend one hour at Jordan Pond; more, if you plan to eat at the restaurant or walk the nature trail.

- *Restroom visit:* 15 minutes
- *Walk to the pond's edge or along a short section of carriage road:* 1/2 hour
- *Gift shop browsing:* 15 minutes
- *Tea and popovers, provided you have a reservation:* 1 hour
- *Jordan Pond Nature Trail:* 30 minutes

PARKING

Limited to cars and small recreational vehicles with spaces for approximately 50 vehicles in front of the Jordan Pond House, but an appropriate location for drop-off from buses. Two larger lots (adding approximately 150 spaces) are found further north of the Jordan Pond House off the Park Loop Road. The upper lot of these two is connected to the Jordan Pond House via a level wood chip path in the southeastern corner of the lot. The lower lot provides access directly to Jordan Pond via the boat ramp. Parking along the shoulder of the Park Loop Road is illegal. The Jordan Pond Gate Lodge and Acadia Corporation dormitory are private residences with no public parking.

FACILITIES

There are restrooms on the lower level of the gift shop and inside the restaurant. A vault toilet is available in the parking lot by the Jordan Pond boat ramp.

ACCESSIBILITY

The Jordan Pond House is fully accessible, including the upper deck via an elevator. The carriage road across from the Jordan Pond Gate Lodge is accessible. The pond can be reached via an accessible trail from the lower parking lot by the boat ramp.

SAFETY

- Occasionally during the summer, the Jordan Pond House experiences an outbreak of yellow jackets on the lawn where tea and popovers are served. The staff will not seat customers where the bees are of greatest density, but visitors should be aware.
- On carriage roads, walkers should be aware of cyclists, while cyclists should be considerate of others by not racing past walkers.
- Cyclists encountering riders on horseback should slow, allow room, and be prepared to stop.
- Congestion in this area is the rule in July and August, so use caution while driving.

TRAILHEADS

For trail description and length, check the Recreation section.

Trailheads behind Jordan Pond Gift Shop

- *Jordan Stream*
- *Asticou Trail*
- *Penobscot Mountain Trail*
- *Jordan Cliffs*

Trailheads from Jordan Pond Boat Ramp

- *Jordan Pond Shore Trail*
- *The Pond Trail*
- *Jordan Pond Nature Trail*



At a Glance – Jordan Pond

SIGNIFICANCE

Jordan Pond is one of Acadia's most pristine lakes, with outstanding mountain scenery to match. To maintain its exceptional water quality, monitoring for continued water health occurs every summer. Its glacially-carved landscape exhibits numerous geologic features. Jordan Pond's beauty, not easily forgotten, has created a favorite destination for over a century for multitudes of visitors who have enjoyed canoeing, quiet solitude, or tea and popovers at the Jordan Pond House.

FAST FACTS

- Jordan Pond is Acadia's deepest lake at 150 feet and is the second largest at 187 acres.
- The Jordan Pond House has served tea and popovers since the late 1800s. The original house burned in 1979, and was rebuilt in 1982.
- The carriage roads were conceived of and built under the direction of John D. Rockefeller, Jr. After completion of many carriage road sections, the land parcel and carriage roads were donated to Acadia National Park. There are 45 miles of carriage roads in the park.
- The Jordan Pond Gate Lodge was built in 1932 as part of the carriage road system.
- Jordan Pond's clear waters are sampled for pH, mercury, clarity, temperature, and dissolved oxygen to monitor the continued health of the watershed.
- Jordan Cliffs on Penobscot Mountain was the site of a successful reintroduction program in the mid 1980s to return peregrine falcons to Acadia National Park.
- Jordan Pond's U-shaped valley, trough lake, rounded mountains, and steep cliffs are all evidence of glacial carving.

PROTECTING YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- Because of the popularity of this area in the summer, afternoons are extremely congested. In an effort to stop illegal parking along the Park Loop Road the National Park Service has placed no parking signs and made the shoulder less accessible.
- Jordan Pond is a highly used area, and off-trail use by both hikers and bikers is a concern. Areas where paths have been worn by off-trail users are roped off and re-vegetated with native plants. Please remain on designated trails.
- Because Jordan Pond is Seal Harbor's drinking water supply, swimming and boats with motors above 10 horse power are prohibited.

MANAGEMENT CONCERNS

Many cyclists use Jordan Pond as their ending point, choosing to use the *Island Explorer* shuttle buses to return to their starting points. There is a high demand for buses from Jordan Pond back to Bar Harbor in the late afternoon. Effort should be made when possible to have bikers consider other options, such as taking the bus to Jordan Pond and biking back to their destination or planning to return in the early afternoon rather than late afternoon.

HELPFUL INFORMATION – JORDAN POND

Fact Sheets:

Amphibians 3-34
Acadia's Fishery 3-39
Plant Groups of Acadia National Park 3-43
Caring for Acadia's Native Plants 3-47
Acadia's Common Plants 3-50
Geology 3-66
Water Quality 3-88
Visitor Use 3-98
Park History 3-105
Carriage Roads of Acadia National Park 3-108

Appendix:

Lakes and Ponds (D)
Mountains (D)
Acadia National Park Timeline (E)
Quotes (E)
Who's Who at Acadia (E)
Carriage Road Bridges (F)
Jordan Pond Nature Trail (H)



Background Information/Narrative

Jordan Pond

Jordan Pond's placid waters are surrounded by Penobscot Mountain to the west, the Bubbles to the north, and Pemetic Mountain to the east. The 187 acre "pond" is not only an integral part of Acadia's scenery but also provides critical habitat for wildlife and serves as the drinking water supply for Seal Harbor.

LANDSCAPE

Jordan Pond's topography is a result of glaciation, having created the U-shaped valley and the deep trough that keep water. The southern shore, where the Jordan Pond House sits, is a glacial moraine formed from glacial debris deposits. The Bubbles' sloping northern sides and steeply chiseled southern sides show the characteristic glacial sculpting of mountains. As the ice crept up the northern slopes, pressure created a thin layer of meltwater at the glacier base. Once over the mountain obstacle, water filled cracks in the granite and refroze. As the ice sheet continued southward, large rocks were "plucked" by fingers of ice from the mountain's southern side. Bubble Rock, visible as a small blip on South Bubble, is a glacial erratic, a rock transported from a distant location and then deposited by the retreating glacier. The large black and white crystals of Bubble Rock contrast with Mount Desert Island's native pink granite. Similar bedrock outcroppings are found 20 miles to the northwest near Lucerne, halfway between Mount Desert Island and Bangor.

NATURAL RESOURCES

Jordan Pond is under the jurisdiction of the State of Maine, powers granted to the state from the Great Ponds Act in the 1600s. Despite the protection afforded by the state and Acadia National Park, there is concern that influences from outside sources, such as air pollutants, acidic deposition, and even potential climate change could adversely affect the ecosystem's integrity. Through annual water quality monitoring during the warm weather months, critical baseline data is analyzed to indicate potential changes.

Jordan Pond's clear waters lack a productive food chain to sustain a strong fishery, although some species of fish are found. These include brook trout, the only native fish on the island, and land-locked salmon and togue, stocked sporadically by the Maine Department of Inland Fisheries. Occasional sightings of beavers, loons, and mergansers reward the patient observer. Above Jordan Pond, on the cliffs of Penobscot Mountain, peregrine falcons nest. In the mid-1980s, as part of a peregrine

reintroduction program, Acadia joined with the Peregrine Fund and Cornell University to return these birds to Acadia's skies. Twenty-two peregrine chicks successfully fledged from Jordan Cliffs. In addition to Penobscot Mountain, other sites in the park such as the Precipice are now home again to these magnificent raptors.

The view of Jordan Pond from the south across an open blueberry field is maintained with periodic controlled burns by park rangers to keep tree growth to a minimum and to rejuvenate the blueberry field. Well-meaning hikers and bikers do more damage than controlled burns when straying off the designated trail as footsteps and bicycle tire treads create eroded paths. To discourage wandering, trampled areas are re-planted with native plants and signs request visitor assistance to stay on the trail.

Another example of the park's re-vegetation efforts is at the southern end of Jordan Pond by the Jordan Pond bridge. Selective cutting has returned a historical vista to view while native plantings help to restore a heavily eroded section around the bridge. Non-native plants, like the bittersweet vine that climbs through many of the trees around the Jordan Pond House area, including near the bridge, displace native plants and are not part of the natural landscape that Acadia strives to protect. This vine with its orange berries and woody stem is considered highly ornamental—but in the garden, not in the wild! Bittersweet stands out in the autumn, when its yellow color is obvious against the green needles or leaves of the tree it climbs. Some of the common native plants along the edge of the pond and in the open field include the lowbush blueberry, northern white cedar, speckled alder, and white birch.

HISTORY

An August afternoon here teems with people on bikes, in cars, and on buses. But imagine the solitude of the same location over 100 years ago where owners of a rustic farm served meals to those who would venture to the remote location. The McIntire family bought the property in 1895 and began the tradition of tea and popovers. In 1946 John D. Rockefeller, Jr. purchased the property and donated it to the National Park Service. He also founded the Acadia Corporation, the company that took over management of the Jordan Pond House. In 1979, the original building burned, but the tradition did not end. By 1982, the present-day restaurant was serving the next generation of tea and popover fans.

Carriage roads intersect the heart of Jordan Pond, winding south past Jordan Stream and rising north above the western shore toward the Bubbles. The generous gift of John D. Rockefeller, Jr., they were built from 1913 to 1940 and reflect Rockefeller's

love of road building and his well-trained eye for the landscape. Numerous features enhanced this state-of-the-art road system that comprises over 50 miles. Three of the 16 carriage road bridges are in the Jordan Pond area.

The Jordan Pond Gate Lodge, built in 1932, as well as the Brown Mountain Gate Lodge on State Route 198, enabled horse-drawn carriages to enter the system from the motor roads, while providing a gate to keep autos out. The French Romanesque Revival style of the Gate Lodge has whimsical details such as birdhouses in the garage gable and A's in the shutters for the architect, Grosvenor Atterbury. The gate lodge was placed at a spot where the motor road and carriage road intersected. A bell hung on the rod through the small archway by the gate so carriage drivers could alert the gatekeeper. Although a gatekeeper never lived in the gate lodges, John D. Rockefeller, Jr.'s engineer, Paul Simpson lived here with his family. Today it is a private residence for the National Park Service.

Rockefeller donated the roads to Acadia, but also funded a 100-man work crew to maintain them. Upon his death in 1960, the maintenance was completely turned over to the National Park Service. Due to budget constraints resulting in limited maintenance, the carriage roads deteriorated from their original state. In the early 1990s, a historic resource survey of the carriage roads offered numerous recommendations to rehabilitate the roads. Today's carriage roads have a hard-packed fine clay surface, open views, and their original 16 foot width. Coping stones were reset, and culverts and ditches are cleaned of debris yearly to arrest erosion of the roads. This ongoing care assures that this unique cultural resource, not found in any other national park, will continue to provide enjoyment for future generations.

JORDAN POND CARRIAGE ROAD WALK FOR GROUPS

This option is for groups interested in learning about some aspects of Acadia National Park while walking along the carriage road behind the Jordan Pond House to the Jordan Pond Bridge and on to the Jordan Pond boat ramp.

Stop One

Start at Jordan Pond House front and then walk to front of Jordan Pond Gate Lodge. *Use History Narrative, page 2-59.*

Stop Two

From the gate lodge, cross the Park Loop Road on to the carriage road and walk to intersection #15. Turn to the right to continue walking. *Use History Narrative, page 2-59.*

Stop Three

Continue on the carriage road to the Jordan Pond Bridge. The bridge was built in 1920 and is similar to one that Rockefeller fancied in New York City's Central Park. *Use Natural Resources Narrative, page 2-58.*

Stop Four

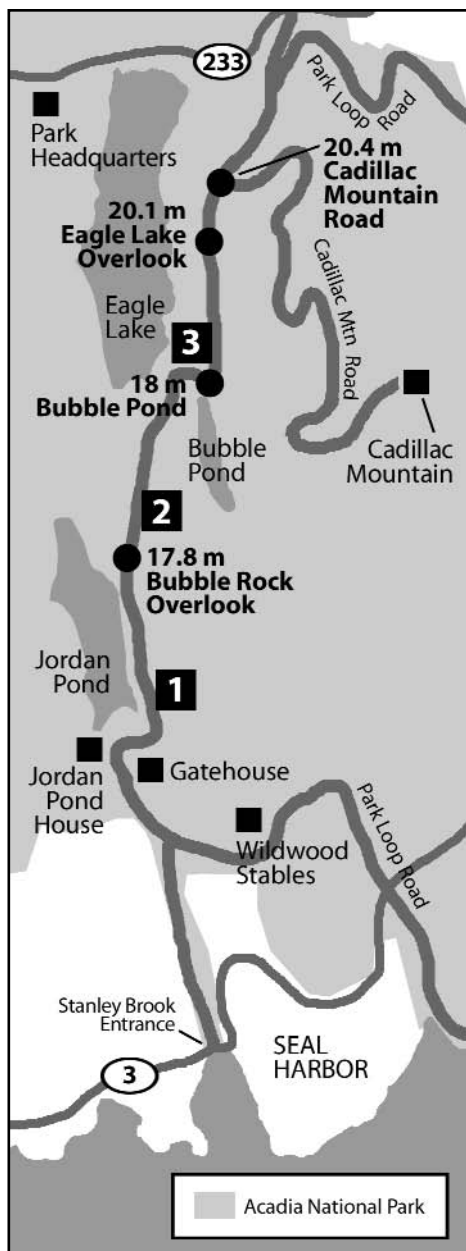
Walk to the east of the bridge along the trail that skirts the edge of Jordan Pond. Stop at the interpretive sign for glacial geology. *Use Landscape Narrative, page 2-58.*

Stop Five

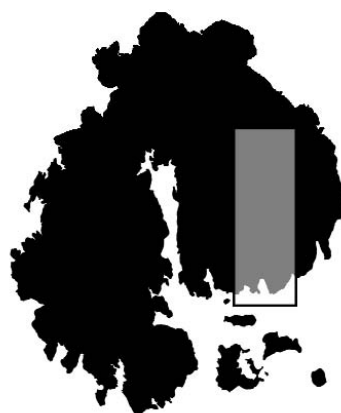
Walk up the boat ramp toward the parking lot if walking the Jordan Pond Nature Trail. If not, return to the Jordan Pond House. *Use Jordan Pond Nature Trail Guide in Appendix H.*

SECTION TWO – PARK SITES

Chapter Nine – Park Loop Road Jordan Pond to Cadillac Mountain Road (Lower Mountain Road)



- 1** The Pond Trail
The Triad
- 2** South Bubble Trail
North Bubble Trail
- 3** Carriage Roads
Pemetic Mountain Trail
West Ridge Cadillac Trail
Carry Trail





Before You Go – What to Know Jordan Pond to Cadillac Mountain Road (Lower Mountain Road) Logistics

LOCATION

This four mile road section runs through Acadia's eastern interior from Jordan Pond to the start of the Cadillac Mountain Road. The road is two-way.

AREA HIGHLIGHTS

Bubble Rock

Large glacial boulder perches above the Park Loop Road on South Bubble Mountain. Hiking is the only way to see Bubble Rock up close. It can be viewed from a distance below on the Park Loop Road.

Bubble Pond

A scenic pond nestled between Cadillac and Pemetic Mountains.

Eagle Lake Overlook

Expansive view of Eagle Lake and the western horizon.

TIME ALLOTMENT

- *Approximate driving time with brief stops at Bubble Rock overlook and Eagle Lake overlook: 15 minutes*
- *Bubble Pond Visit: half hour (tour buses cannot park at Bubble Pond due to small parking lot)*

PARKING

- There is no parking along the road side on this stretch of the Park Loop Road except for two pullouts: Bubble Rock Overlook (space for six vehicles) and Eagle Lake Overlook (space for six vehicles).
- Bubble Rock and Bubble Pond each have a small parking lot for approximately 20 vehicles. Both of these lots are often full by mid-morning in the summer.
- Bubble Pond parking lot cannot accommodate tour buses at any time.

FACILITIES

There is a vault toilet in the Bubble Pond parking area. A few picnic tables are available at the pond's northern end, just beyond the parking area.

ACCESSIBILITY

Bubble Pond is accessible. A paved path with a slight slope leads to the pond's edge.

SAFETY

- The two-way traffic on this narrow road requires drivers to use extra caution, especially around cyclists. There is no shoulder. The road's speed limit is 35 mph with a reduced speed of 25 mph in the Bubble Pond area.
- If parking at Bubble Pond, please do not park on the edge of the roadway entering the parking lot! If the lot is full, try to return at another time. Once one car parks on the side, others follow, causing dangerous congestion.
- If walking on the carriage roads, please be alert for cyclists.
- Cyclists, please slow your speed and watch for walkers and horseback riders.

TRAILHEADS

For descriptions and distances of trails, check the Recreation section on page 43.

Small pull-out on left after Jordan Pond site on Park Loop Road

- *The Pond Trail*
- *The Triad*

Bubble Rock Parking

- *South Bubble Trail*
- *North Bubble Trail*

Bubble Pond Parking

- *Pemetic Mountain Trail*
- *West Face Cadillac Trail*
- *Carry Trail to South Bubble/ North Bubble*

Carriage Roads from Bubble Pond

Check carriage road loop descriptions in Recreation section.

- *Bubble Pond to Jordan Pond*
- *Eagle Lake*



At a Glance

Jordan Pond to Cadillac Mountain Road (The Lower Mountain Road)

SIGNIFICANCE

The Jordan Pond–Eagle Lake Road, completed in 1925, was the first section of the Park Loop Road. It allowed for many more people to experience some of Acadia's most spectacular mountain and lake scenery. Known today as the Lower Mountain Road, this four mile section runs from Jordan Pond to the junction of the three and a half mile Cadillac Mountain Road, providing access to trailheads, carriage roads, Bubble Pond, and views of Jordan Pond, Bubble Rock, and Eagle Lake.

FAST FACTS

- Bubble Rock is a fourteen-ton glacial erratic transported by ice from 20 miles to the northwest of its current location.
- Visiting artists named Eagle Lake in the mid-1800s for eagles flying overhead.
- Bubble Pond is 32 acres in size and 30 feet deep. Eagle Lake is 436 acres in size and 110 feet deep at its deepest point. The park monitors both for water quality.
- Acadia's lakes and ponds are stocked with fish by the Maine Department of Inland Fisheries and Wildlife. This is because of legislation in the 1600s giving the state (then part of Massachusetts Bay Colony) jurisdiction of waters greater than 10 acres in size.

PROTECTING YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- Keep to the trail so vegetation is not trampled. Mountain bikes are prohibited on hiking trails but may be used on park carriage roads (except to the south of Jordan Pond).
- The smooth bark of the beech trees around the South Bubble trail and in all the park needs protection from would-be carvers. Please—keep your initials to yourself.
- Watch your butts! The sandy shore at Bubble Pond is not a large ashtray. Cigarette butts are litter and can harm wildlife as well as look unsightly. Please be sure to pack out all trash.
- Bubble Pond is a natural draw for picnickers—who in turn become a draw for wildlife. Birds, red squirrels, and chipmunks can easily capture the attention of well-meaning visitors. Do not feed them—they are not adapted for our foods and feeding can make them reliant on humans.
- Restrooms are found at Jordan Pond and the Cadillac Mountain summit. Vault toilets are available at Bubble Pond. Please use appropriate facilities.

HELPFUL INFORMATION

JORDAN POND TO CADILLAC MOUNTAIN ROAD

Fact Sheets:

Amphibians 3-34
Acadia's Fishery 3-39
Plant Groups of Acadia National Park 3-43
Caring for Acadia's Native Plants 3-47
Acadia's Common Plants 3-50
Geology 3-66
Water Quality 3-88
Visitor Use 3-98
Park History 3-105
Carriage Roads of Acadia National Park 3-108

Appendix:

Lakes and Ponds (D)
Mountains (D)
Acadia National Park Timeline (E)
Quotes (E)
Who's Who at Acadia (E)
Carriage Road Bridges (F)



Background Information/Narrative Jordan Pond to Cadillac Mountain Road (Lower Mountain Road)

Mileages taken from visitor center as driven around entire loop.

JORDAN POND TO BUBBLE ROCK OVERLOOK

No planned stops.

Often the last portion of the Park Loop Road to be traveled, the Lower Mountain Road was actually the first section completed. Originally called the Jordan Pond-Eagle Lake Road, it was funded by the federal government and by donations from John D. Rockefeller Jr. Rockefeller saw the development of motor roads as a way to keep automobiles off the carriage roads, while George Dorr, the park's first superintendent saw motor roads as the direction of the future to provide access into Acadia's heart.

The building of the Park Loop Road was not without controversy. Some summer residents felt any network of roads would ruin the wilderness quality of the island's interior. With those dissenting voices in mind, and the perfection standards inherent in Rockefeller's involvement, high road-building standards maintained the landscape's integrity. Opened in 1925, the road was developed to blend with its natural surroundings, right down to the road's one-time surface of crushed pink granite.

As the Park Loop Road ascends from Jordan Pond and hugs the base of Pemetic Mountain, the pond lies below. A carriage road above the pond's western shore stretches through a large jumble of talus and boulders at the base of Penobscot Mountain, demonstrating the design and construction skills of the carriage road engineers. As South Bubble comes into view, Bubble Rock, perched on the mountain's southern side, looms above the Park Loop Road.

BUBBLE ROCK OVERLOOK

Passengers stay on bus.

Location

Mile 17.8 on the left hand side of the road.

Parking

A small pull-off with spaces for approximately six cars offers a view of the rock from below. It may be best to slow down and have your group look from the bus.

NOTE: Interpretive Sign

Although Acadia's landscape is littered with erratics (rocks deposited from glacial ice), this 14-ton boulder, the size of a cargo van, is perhaps Acadia's best known "rock from away." The granite boulder's coarse-grained black and white crystals are not indicative of the local bedrock, but rather have origins 20 miles to the northwest between Bangor and Ellsworth. A small pull-out on the left offers a photo opportunity, but for an up-close look at the rock, the trail up South Bubble is the only way.

BUBBLE ROCK OVERLOOK TO BUBBLE POND

No planned stops.

At mile 18 is the Bubble Rock trailhead parking. The first half of South Bubble's trail winds through a forest of beech trees. Beech trees dominate along this trail in part because their roots are able to develop new saplings. The tree's smooth white bark has unfortunately made them a target for would-be carvers. Initials permanently blazed into the bark increase the tree's susceptibility to potential diseases. Logging practices in the late 1800s and the early 1900s, which reduced huge tracts of beech trees, are cited as one of the reasons for the extinction of passenger pigeons, once so numerous they blackened the skies. One of the main food sources for passenger pigeons, beech nuts, came from beech trees. Coupled with hunting, the loss of these forests led to the demise of the passenger pigeon. The loss of the passenger pigeon, a food source for peregrine falcons, may have been a contributing factor to the beginning of the decline of peregrine falcons well before the use of DDT.

Blue blazes painted on the granite mark trails above treeline. By roping off some areas on the summit, resource managers attempt to guide visitors' feet directly to Bubble Rock to avoid trampling fragile vegetation. Stunning views of Jordan Pond and the ocean beyond are found from the southern edge of South Bubble's summit.

The Park Loop Road continues through a mixed forest that includes stands of beech like those found on the South Bubble Trail. It curves between the saddle formed by Pemetic Mountain and the Bubbles. Right before the turn-off for Bubble Pond, Cadillac Mountain rises directly ahead.

BUBBLE POND

No parking for tour buses. Pond cannot be seen from the parking lot.

Location

Mile 19

Parking

This is a small lot (20 spaces) with a narrow entrance. During July and August and

the peak fall color season, this parking lot is extremely congested. Parking may not be available. The pond is not visible from the Park Loop Road.

Bubble Pond is a lovely destination located in a small glacial valley flanked by Cadillac and Pemetic Mountains. Afternoon winds often howl between these two mountains and can create a wind tunnel effect, turning a boater's leisurely paddle into an interesting adventure. The pond is stocked with brook trout by the Maine Department of Inland Fisheries and Wildlife.

In the late 1800s, an outbreak of typhoid traced to local wells in both Bar Harbor and Northeast Harbor pushed the towns to consider the island's interior lakes and ponds as public water supplies. Bubble Pond, like Jordan Pond and Eagle Lake, is a public reservoir with swimming prohibited. A parking area along the pond's edge caused concern about the safety of the drinking water, so in the 1980s the lot was moved 200 feet away from the pond to keep oil, particulates from automobile exhaust, and other pollutants from running into the water.

A carriage road follows Bubble Pond's west side, offering access to the pond's rocky shore. It continues southward to Wildwood Stables and Jordan Pond. Across the Park Loop Road from Bubble Pond the carriage road leads to Eagle Lake. The carriage road bridge at the northern end of the pond has a span of almost 200 feet and is unique to the carriage road system as it is the only one made completely of rock, rather than reinforced concrete faced with cut stone.

EAGLE LAKE OVERLOOK

Passengers can stay on bus.

Location

Mile 20.1

Parking

Parallel parking pull-off.

North of Bubble Pond, the road ascends above 436 acre Eagle Lake. A pull-out on the left allows visitors a chance to linger over the open views to the west. In the distance, the predominant bump is Blue Hill. Rising from Eagle Lake's western shore is Sargent Mountain. The Bubbles frame the lake's southern end. A six mile carriage road loop offers outstanding views of Eagle Lake and the surrounding mountains. The carriage road's western side climbs along the base of Sargent Mountain, while the eastern and northern sections are more level. A hiking trail follows along the lake's southern and southwestern shores.

Visiting artists in the mid-1800s painted the sublime scenery of this large lake, bestowing the name Eagle Lake upon it, in reference to eagles soaring above its clear waters. In the late 1800s, a small steamship plied these waters, transporting visitors to the base of Green Mountain (Cadillac) to ride the Green Mountain Cog Railway to the summit. Visitors arrived at Eagle Lake via buckboard and then took the 15-minute trip across the lake on the *Wauwinnet*. It was a short-lived venture, and after ten years, the *Wauwinnet* was sunk to the bottom of the lake.

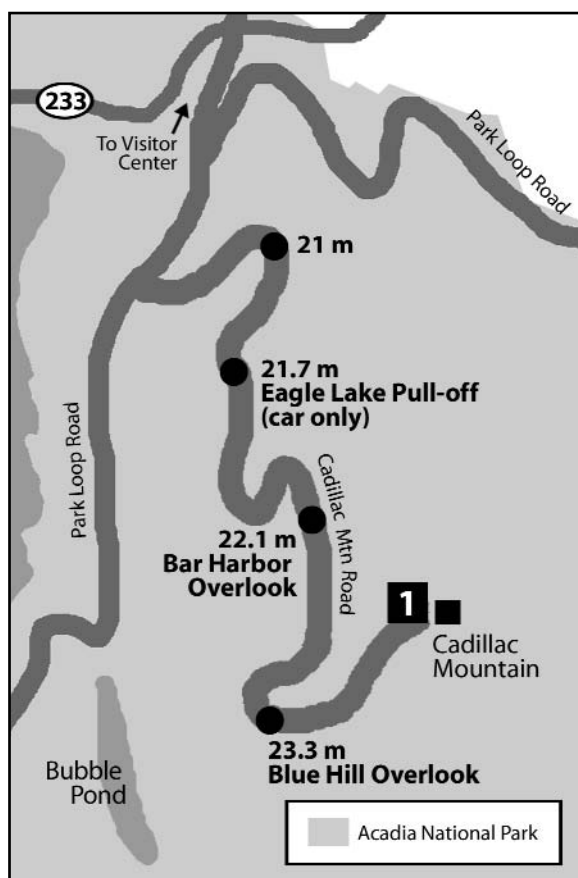
Each year, from late April through October, park staff and trained volunteers sample many of Acadia's 22 named lakes and ponds to characterize water quality conditions as part of the park's water monitoring program. Monthly monitoring allows biologists to detect changes in water chemistry that can result from increased nutrient input (from sources such as road run-off) and acidic precipitation. Currently, lake monitors collect data on surface temperature and water transparency at Eagle Lake. Monitoring records dating back to the early 1980s show that the water quality in Eagle Lake has remained fairly consistent during this period.

Long-term data records will help park staff detect water quality trends and identify pollution sources. Protecting Eagle Lake's water quality is especially important since it is Bar Harbor's municipal water supply. It is also enjoyed by many sportsmen, and is periodically stocked with togue, landlocked salmon, and brook trout by the Maine Department of Inland Fisheries and Wildlife.

The Park Loop Road continues on to intersect with the Cadillac Mountain Road at mile 20.4. If not going to Cadillac, continue straight until you come to the junction of the Paradise Hill spur road and the loop. Turn to the left if you are heading to the visitor center, Bar Harbor, or the western side of the island. Continue straight for the Park Loop Road.

SECTION TWO – PARK SITES

Chapter Ten – Cadillac Mountain Road and Summit



- 1** Cadillac Mountain Path
 North Ridge Trail
 West Face Trail
 South Ridge Trail
 Dorr Mountain Notch Trail





Before You Go – What to Know Cadillac Mountain Logistics

LOCATION

The Cadillac Mountain summit and Blue Hill Overlook are accessed from the Cadillac Mountain road, a 3-1/2 mile spur road off the Park Loop Road.

AREA HIGHLIGHTS

Cadillac Mountain Road

The Cadillac Mountain Road offers outstanding views all the way to the summit.

(LG/K) Summit Trail

A half-mile paved path circles the summit. Interpretive signs highlighting geology, history, and surrounding landmarks are along the trail.

(LG/K) Blue Hill Overlook

Prior to the summit parking lot on the left hand side of the road is the parking area for this overlook. Expansive views to the northwest can be seen over the ledges. An interpretive sign explaining air quality is here.

(LG/K) Ranger-led Programs

During the summer and autumn, park rangers offer short walks and talks on the summit. In the autumn hawk watches are also offered.

TIME ALLOTMENT

- *Cadillac Mountain Summit Road (Driving time with two stops):* 10 minutes
- *Restrooms and Gift Shop:* 15 minutes
- *Cadillac Summit Path:* 20 minutes with stops

PARKING

- There are 3 pull-offs on the summit road that will accommodate tour buses and large recreational vehicles.
- The lot on Cadillac Mountain provides parking for about 150 cars. Buses and RVs should park parallel to the sidewalk after exiting the parking area, opposite the gift shop.
- The Blue Hill Overlook parking lot, located just before the Cadillac summit parking lot, has spaces for 40 vehicles.

FACILITIES

There are flush toilets next to the Cadillac Mountain gift shop. The gift shop sells a small assortment of snacks, films, sunscreen, and souvenirs.

ACCESSIBILITY

The Cadillac summit trail is rated easy, but it should be noted that the trail slopes downward and has a steep incline back to the summit. The gift shop and restrooms are accessible, although the gift shop is small with little room to maneuver. Views toward Bar Harbor from the parking lot are accessible as are views from the Blue Hill Overlook.

SAFETY

- The summit road is narrow in places. Please remain alert and cautious around cyclists.
- The summit trail slopes downward and has a short climb back to the summit. Footing should be watched. Groups with seniors or those with difficulty walking should be aware that although the path is not long, it does dip and rise.
- During rain and fog, rocks can be exceptionally slippery and visibility at zero.
- A light jacket is always a good idea to have on Cadillac no matter the weather, as cooler temperatures are common.
- Groups traveling with children should be extra cautious. Children have a tendency to run across the ledges and climb over the rocks, easily falling. Numerous accidents have happened on Cadillac because of such activity.

TRAILHEADS AND TRAILHEAD CONNECTIONS

For trail descriptions and distances see hiking fact sheets in the Recreation section. Four trails leave the summit following the four cardinal directions:

- *North Ridge Trail*
- *West Face Trail*
- *South Ridge Trail*
- *Dorr Mountain Notch Trail*



At a Glance – Cadillac Mountain

SIGNIFICANCE

Cadillac Mountain, at 1530 feet, is not only Acadia's highest mountain, but the highest mountain along the eastern seaboard of the United States. The only mountain in the park with access to the summit via a road, it is a place where park managers try to balance the National Park Service mission of "protect and preserve" with "enjoyment for all." From the summit, an Acadian panorama of mountains, islands, forests, lakes, shoreline, and ocean stretches to the horizon. To the north is the mainland. Bar Harbor and the Porcupine Islands lie to the east with Schoodic Peninsula in the distance across Frenchman Bay. To the west are the mountains of Dorr, Champlain, the Beehive, Gorham, and Huguenot Head; the Bowl, Otter Creek and Otter Cove, as well as outer islands. The view to the west is best seen from the Blue Hill overlook, where Eagle Lake and the western mountains of Acadia lie in front of the predominant "bump" of Blue Hill across Blue Hill Bay.

FAST FACTS

- The mountain is named after Antoine Lamuet, a Frenchman who was granted land in the New World, including Mount Desert Island in 1688. Dubbing himself with a fake nobleman's title, the Sieur de la Mothe de Cadillac, he stayed in the area for only a short time. He went on to found Detroit.
- Originally called Green Mountain, the name was changed to Cadillac by George Dorr, the park's first superintendent, to reflect the history of the area.
- A cog railway up the mountain and a hotel on the summit were here in the late 1800s.
- Cadillac Mountain's summit landscape of subalpine plants and stunted trees comes not from being above treeline, but from harsh stresses of the climate and erosion.
- Acadia exceeds clean air standards for ground-level ozone at times during the summer. Particulate matter (smog) can obscure views.
- Cadillac Mountain is the first location in the country to see the sunrise from October 7 to March 7.
- Sunrise in the summer falls between 4:30am and 5:30am.

PROTECTING YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- Cadillac's large volume of visitors leave their mark behind, no matter how careful they may be. The summit's plants, although able to withstand harsh weather conditions can fall victim to constant trampling. Visitors should remain on the paved trail. If need arises to go off, they should walk on exposed rock and not over plants.
- During summer afternoons and at sunset, the parking on Cadillac reaches peak capacity. Mornings on Cadillac are considerably quieter.
- Cigarette smokers seem to use Cadillac as an ashtray. Remind visitors to dispose of cigarette butts, and other garbage, properly. Pack it in, pack it out.
- To avoid detracting from visitor's enjoyment of the mountain, buses should turn off engines once parked.
- Remember your fellow visitor; quiet voices help everyone to appreciate the inspiration of the mountain.

HELPFUL INFORMATION – CADILLAC MOUNTAIN

Fact Sheets:

Raptor Migration and Hawk Watch 3-29
Plant Groups of Acadia National Park 3-43
Caring for Acadia's Native Plants 3-47
Acadia's Common Plants 3-50
Geographic Features 3-63
Geology 3-66
Downeast and Downwind – Air Quality 3-85
Protecting Park Resources 3-88
Park History 3-105

Appendix:

Mountains (D)
Glacial Geology and Geologic Glossary (D)



Background Information/Narrative Cadillac Mountain Road

For centuries, people sought ways to reach the island's highest mountain for inspiration, sustenance, and spectacular panoramas. Footpaths marked the way for American Indians to reach their sacred mountain. Logging roads were built on its slopes for timber. In 1853, a federal survey site was located on its summit, and a rough-hewn road provided access. The Brewer family, who owned the mountain's land, widened the survey road so buckboards could travel its length. They also added a tollbooth and a small hotel called the Summit Tavern. In the late 1800s, a short-lived cog railway offered excursions for visitors and a larger hotel, The Summit House, provided accommodations.

These historic and various uses influenced park administrators to construct a quality road that tourism would benefit from. The assistant park service director in the 1920s stated, "...so that those who can not climb may get the opportunity to receive the inspiration and feel the exaltation of spirit that come with an hour spent on the breeze-swept hills with their superb views over sea and island, losing themselves in the distance." He also added that in his opinion, "no road should go to the top of any other mountain in the park."

Construction of the summit road would progress slowly. Opposition, lack of funds, varying opinions, and different contractors, not to mention the difficulties of grading, blasting, and building embankments, turned the venture into a ten year project. The first 4300 feet were completed in September of 1923, offering views of Eagle Lake and the Breakneck Ponds. The final grading to the summit was not completed until November 1, 1930. This last leg of construction was problematic due to the poor workmanship by the contractor. Serious landscape degradation due to inattention to appropriate blasting procedures and non-existent clean-up scarred the summit. Park officials, remembering the concerned voices of a decade ago opposing the road, put much effort into repairing the damage where possible. One of the marred areas became the parking lot, a much-needed addition to the final road, and the once-abandoned clean-up along the road-side was completed.

The final road work included widening some sections for viewing pull-outs, and surfacing the road with crushed pink granite similar to the original Jordan Pond-Eagle Lake road (known as Lower Mountain Road today). Despite some of the shortcomings, the end result was lauded as a remarkable piece of engineering, and was officially dedicated on July 23, 1932. The damage incurred by a careless contractor almost a century ago is still a lesson for park managers of today who try to balance the need for visitor services and enjoyment, with their prime mandate of protecting and preserving the park's natural resources.

The three-and-a-half mile summit road offers many opportunities for breathtaking views and a better understanding of the natural history of Acadia. The road begins in a mixed forest composed of hardwoods like striped maple, sugar maple, and red oak; post-fire trees like white birch, quaking aspen, and big tooth aspen; and conifers like red spruce, balsam fir, and white pine. The forest soon gives way to exposed rock ledges scattered with lowbush blueberry and sheep laurel. Some species of trees, like the oaks and maples, disappear almost entirely while red spruce, balsam fir, white birch, black cherry, and shadbush are found in increasingly smaller numbers. Their growth also becomes stunted at higher elevations. This change results from harsh exposure to winds, winter snow and ice, and an obvious lack of soil.

The second pullout on the right side of the summit road (mile 21.7 for cars only) overlooks Eagle Lake, Pemetic Mountain, the Bubbles, and Sargent Mountain. The U-shaped valleys and north-south trending rounded mountain ridges are evidence of Acadia's glacial legacy. One can visualize fingers of ice between the mountains receding northward after the granite ridges had been engulfed in ice. Another geologic feature much older than those created by glacial ice can be found a little farther up the road on the right. Exposed in a large road cut is a wide band of dark rock contrasting boldly with the coarse-grained pink granite. This is a diabase dike, formed beneath the Earth's surface when magma oozed between already present fractures in the older rock and cooled quickly.

There are numerous views toward Bar Harbor, Frenchman Bay, the Porcupine Islands, and Schoodic Peninsula. (Pull-offs at mile 21, and between mile 22.1 to mile 22.4). Bar Harbor is named to reflect its connection via a gravelly sand bar exposed at low tide to Bar Island. You might see someone driving across it! The Porcupine Islands, similar in appearance to their namesakes, were the hilltops of 6,000 years ago when Frenchman Bay was dry. Since that time, the land has slowly been sinking and the sea level rising.

Just before the summit (mile 23.3) the southern horizon opens to display a spattering of islands along the coast. The mountainous island furthest in the distance is Isle au Haut. Half of this large island is populated by a small year-round community while the other half is part of Acadia National Park. This remote island is accessible by mailboat from Stonington, a one-and-a-half hour drive down the coast. Five lean-to shelters are available for campers, but must be reserved in advance. To maintain the wilderness quality of this section of Acadia, the park service allows no more than 50 visitors a day.

At mile 23.4, to the left, is the Blue Hill Overlook. An air quality interpretive sign is at the overlook. At mile 23.6 is the main parking lot for the summit.



Background Information/Narrative Cadillac Mountain

From atop Cadillac Mountain, all that is Acadia, from rocky mountain summits, a forest menagerie, and freshwater lakes, to jagged coastline and outer islands, is spread at one's feet. Silence, even in the presence of hundreds of other visitors, makes itself known in hushed tones. Overhead, birds float in thermal currents. The most spectacular flights come in autumn with the annual hawk migration.

Cadillac Mountain is the highest mountain along the eastern seaboard at 1,530 feet. It is named after a self-proclaimed French nobleman, Sieur de la Mothe de Cadillac, who was granted 100,000 acres including Mount Desert Island in 1688. He later founded the city of Detroit. Indians of the Wabanaki tribe considered this mountain sacred, as do their modern-day descendants. The first European to write about this summit and the others surrounding it was Samuel Champlain, who upon viewing this mountainous landmark from the sea in 1604 wrote: "The island is high and notched in places so that from the sea it gives the appearance of seven or eight mountain ranges. The summits are all bare and rocky. The slopes are covered with pine, fir, and birch. I called it the Isles De Monts Deserts."

Champlain's description is still accurate, the summits appearing barren of vegetation. Closer inspection shows the summit to be a mix of bare rock, pockets of alpine plants, and stunted trees. This plant mix is similar to the one found above treeline on much higher mountains, but Cadillac's height of 1530 feet is considered too low to be affected by the ecological conditions that high altitude bring. Instead Cadillac's summit environment, like some other mountains in the park, is the result of a lack of soil from frequent fires, wind, and run-off resulting in erosion, and a climate harsh with winter winds, snow, and ice.

The exposed rock provides an opportunity to read part of the island's geologic story. Peering closely at this granite, one can see flecks of white, pink, and grayish-black. This color mosaic is made from the individual minerals of quartz, feldspar, and hornblende. Four hundred and twenty million years ago, the origin of this rock was a molten mineral mix deep beneath the surface of the Earth. This magma plug oozed up through overlying rock, causing it to melt and collapse into the fiery solution. Once cooled, it solidified into granite. The crystal size of this granite lends a clue to how long it took the magma to cool. If you were unable to find any obvious crystals that would indicate a relatively quick cool down. Crystals of an increasingly larger size would indicate a slower cooling period. Eons of erosive elements eventually exposed the rock, setting the stage for what one day would become Acadia National Park's centerpiece.

Criss-crossing the rock are cracks and crevices, giving the granite its blocky appearance. Granite's propensity to fracture at 90 degree angles is a result of internal geologic pressure exerted prior to the exposure of the granite at the surface. Exposure to the elements, especially freezing and thawing, has expanded the joints into large obvious fractures. Exfoliation, the result of released pressure as overlying rock layers eroded lessening the weight on the granite, created horizontal cracks. Erosion over time has weathered these granite wrinkles.

Cadillac Mountain provides an ideal setting for sunsets. Many evenings, the mountain summit is dotted with people watching the sky show. After sunset a procession of lights snake down the mountain road. Not quite as many cars head up in the morning for sunrise. Cadillac Mountain competes with two other geographical locations in Maine—Quoddy Head on Maine's northeastern edge and Mars Hill, further inland to the north, to claim the first sunrise in the country. Because of seasonal variations, Cadillac Mountain sees the sun first from two weeks after the autumn equinox through the two weeks before the spring equinox. Those combined four weeks before and after the equinoxes give first sunrise honors to Quoddy Head. From the spring equinox to the autumn equinox the first sunrise in the United States is at Mars Hill.

In the late 1800s, some visitors could simply wake atop Cadillac Mountain (then called Green Mountain) to watch the sunrise—from a hotel. The Summit House, built in 1883 housed up to 50 guests and could serve 130 diners. Access came by foot or via the Green Mountain Railway, a cog railroad completed in the same year. Summer guests reached the base of the mountain via a steamer across Eagle Lake, and then boarded the passenger cars that were pushed up by a 10 ton locomotive. After paying \$2.50 fare, and a half hour travel time, visitors arrived at the summit—almost 3,000 in the first year. Both of these ventures did not last long, as the Summit House was razed in 1896 (the first one burned in 1884) and bankruptcy claimed the cog railway by 1889.

Today, Cadillac's visitation has grown exponentially, hosting many more visitors than other park summits. It is a well-worn mountain, in need of strong resource protection from those who love the mountain the most. Once on the mountain top, visitors are drawn by the scenery surrounding them, leaving the trail as they take in one view after another. The seemingly tough vegetation underfoot is often ignored, but attention must be paid as these plants may be more vulnerable than suspected. Summer offers recuperation from the harshness of winter on the exposed summit, but with high visitation, serious damage to these plant communities happens by the constant trampling of off-trail use. This leads to a higher rate of erosion removing more soil and thus adding more stress.

Research studies conducted on Cadillac, as well as on Pemetic and Sargent Mountains clearly show the damage done to these pockets of vegetation. Many of Acadia's mountain species at the edge of their geographical range could serve as important indicator species in examining the possibilities of global climate change, or to study their genetic diversity. Remaining on the trail is critical, and if one must go off the trail, one should choose a path over bare exposed rock rather than through plants or gravelly soil.

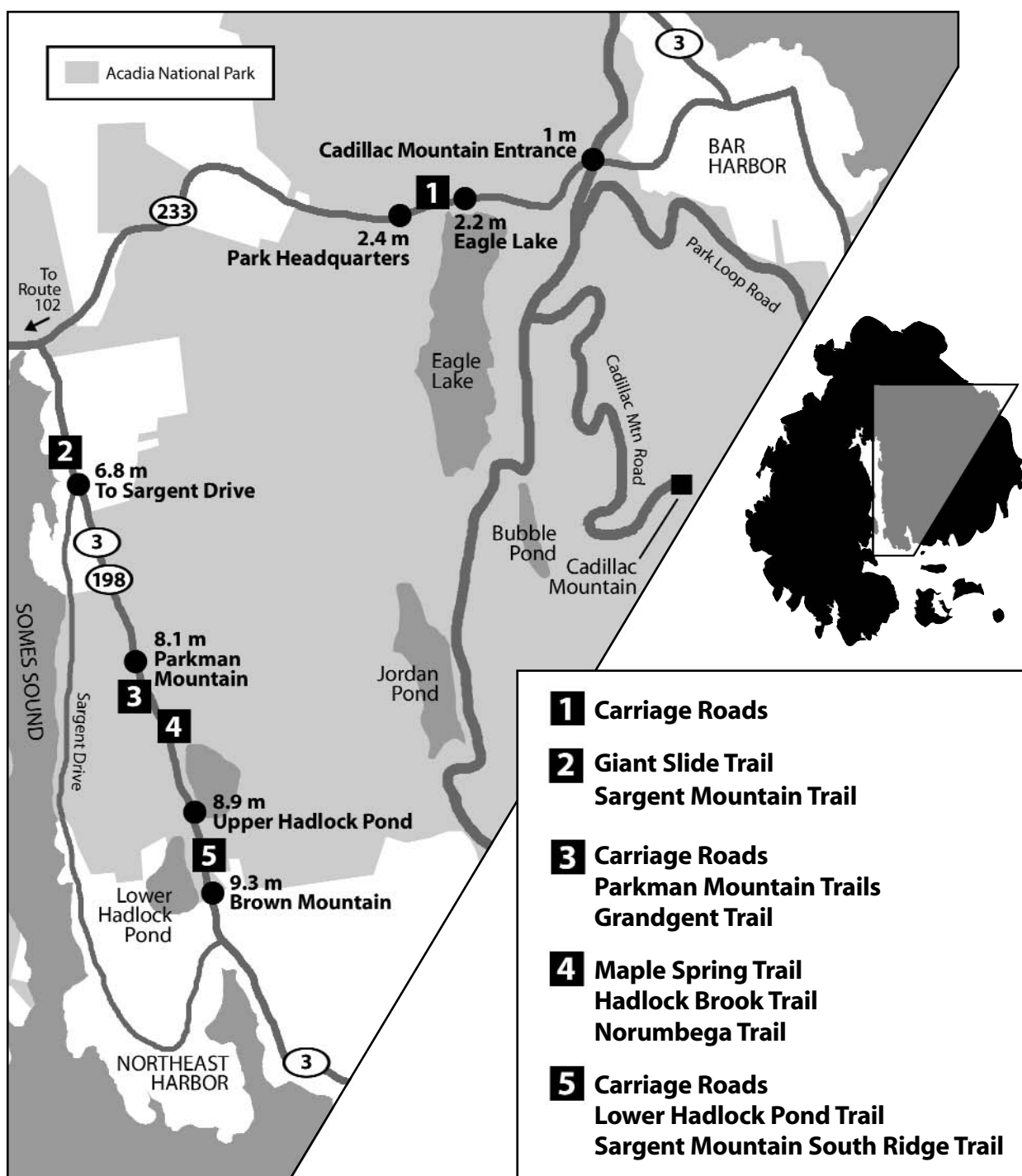
Three plant communities identified by their dominant species are on the summit: 1) the crevasse community of three-leaf cinquefoil and blueberry, 2) shrub community of sheep laurel, blueberry, and huckleberry, and 3) forest mix dominated by red spruce. Some rare plant species are known to live on Cadillac.

Another management concern, clearly illustrated from the summit of Cadillac, is poor air quality. Despite Acadia's federal listing as a Class I protected area (it is required by law to have the cleanest air in the country) healthful air quality standards sometimes fall short. At times, the view toward Blue Hill from Cadillac Mountain is almost obscured. Particulate matter causes the distant mountain to fade from sight. These episodes often correspond with unsafe measurements of ground-level ozone, a possible threat to both park vegetation and human health. Ozone is created by a chemical reaction between sunlight and nitrogen oxides, a by-product of burning fossil fuels. Acadia, although not a major source of these nitrogen oxides, is a recipient of air currents from urban centers like Boston and New York that skirt the downeast coast. During the summer, the ozone levels can be higher than at other times of the year because of the increase in sunlight. The result is a bath of chemicals and particulates along the Maine coast. Acadia issues alerts to let visitors know when the park has reached unhealthy levels of ground-level ozone.

Park air quality resource specialists monitor Acadia's air for both acidic and mercury deposition, visibility and fine particulates, UV-B changes to track potential thinning atmospheric ozone, and effects of ground-level ozone levels and their effects on vegetation and human health. This information is part of a nationwide monitoring program.

SECTION TWO – PARK SITES

Chapter Eleven Other Park Areas on Mount Desert Island (State Route 233 and State Route 198)





What to Know – Before You Go Other Park Areas on Mount Desert Island (State Route 233 to State Route 198 and Sargent Drive) Logistics

LOCATION

State Route 198 runs along the western side of the eastern half of Mount Desert Island and State Route 233 crosses the middle of the island's eastern half. Sargent Drive hugs the eastern shore of Somes Sound and is accessed from State Route 198. Numerous park trails, carriage roads, lakes, and ponds are accessed from these routes.

AREA HIGHLIGHTS

Eagle Lake

Carriage road and boat ramp access.

Sargent Drive and Somes Sound

Scenic road hugging Somes Sound, the only fjord on the east coast of the United States.

Hiking Trails

Trails to reach the summits of Sargent, Norembega, and Parkman Mountains, and around the Hadlock Ponds.

Carriage Roads

Eagle Lake, Aunt Betty Pond, Witch Hole Pond, Around Mountain, Hadlock Pond, and Amphitheatre carriage road loops are on this side of the park.

Brown Mountain Gate Lodge

One of the gate lodges of the carriage road system, the parking area just to the north of the gate lodge provides access to carriage roads.

TIME ALLOTMENT

- *Driving time from Bar Harbor to Northeast Harbor via State Route 233/ State Route 198: 20 minutes*
- *Driving time—Sargent Drive: 15 minutes*
- *Other sites: varies depending on interest and activities*

PARKING

Varies according to site. See descriptions in Background Information/Narrative section.

FACILITIES

- Restrooms at Acadia National Park Headquarters
- Vault toilets at Eagle Lake Parking, Parkman Mountain Parking, and Brown Mountain Parking
- Gas stations, groceries, restaurants in Bar Harbor and Northeast Harbor

ACCESSIBILITY

- Carriage roads
- Park Headquarters

SAFETY

- Obey posted speed limits on the state routes.
- On most summer and busy autumn days the shoulders of State Route 233 at Eagle Lake become crowded with parked cars. Please slow down and watch for pedestrians.

TRAILHEADS AND TRAILHEAD CONNECTIONS

From State Route 198

- *Giant Slide Trail*
- *Sargent Mountain North Ridge Trail*

From Parkman Mountain Parking Lot - off State Route 198

- *Parkman Mountain, Bald Peak, and Gilmore Peak Trails*
- *Grandgent Trail*

From Norumbega Parking Pull-Off - State Route 198

- *Maple Spring Trail*
- *Hadlock Brook Trail*
- *Norumbega Mountain Trail*

From Brown Mountain Parking Lot - off of State Route 198

- *Lower Hadlock Pond Trail*
- *Sargent Mountain South Ridge Trail*



At A Glance

Other Park Areas on Mount Desert Island (State Route 233 to State Route 198 and Sargeant Drive)

SIGNIFICANCE

This area of the park is not clearly defined with a specific entrance, illustrating the intertwining of park lands with private lands. There are numerous carriage roads to enjoy in this part of Acadia, and Sargent Drive gives visitors an exceptional view of Somes Sound, the only fjord along the east coast of the United States.

FAST FACTS

- Eagle Lake is 436 acres in size and 110 feet deep at its deepest point. It was named by visiting artists in the mid 1800s for eagles flying overhead.
- Somes Sound is a fjord, a glacial valley drowned by the sea. It is indicated by steep rocky sides that drop straight into the ocean and greater depth at its end than at its mouth.
- The rounded mountain to the north of Upper Hadlock Pond is Bald Peak.
- Brown Mountain Gate Lodge was built in 1932. Its purpose was the same as the gate lodge at Jordan Pond—to assure that cars would not drive on the carriage roads. It is a private residence today.

PROTECT YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- Respect private property if hiking on trails that also cross private lands.
- Use carriage road etiquette as outlined in the biking chapter in the Recreation section.

HELPFUL INFORMATION – PARK SITES ON STATE ROUTE 233/STATE ROUTE 198

Fact Sheets:

Geology 3-66

Park History 3-105

Carriage Roads of Acadia National Park 3-108

Acadia's Historic Trails 3-111

Appendix:

Lakes and Ponds (D)



Background Information/Narrative Other Park Areas on Mount Desert Island (Route 233 to Route 198 and Sargent Drive)

NOTE: Distances are from the intersection of State Route 233 and State Route 3 in Bar Harbor.

CADILLAC MOUNTAIN ENTRANCE TO PARK LOOP ROAD

Location

Mile 1 Cadillac Mountain entrance is one of four main entrances to the Park Loop Road. After turning into the entrance, access for Sieur de Monts Spring, Sand Beach, Cadillac Mountain, and Jordan Pond is to the left. To the right is access for the visitor center.

EAGLE LAKE

Passengers remain on bus; lake can be seen from bus.

Location

Mile 2.1 on State Route 233.

Parking

Mile 2.1 on left; Boat ramp parking (10 spaces); *Mile 2.2* on right; carriage road parking for 18 cars.

NOTE: Many people parallel park on either side of State Route 233. If doing so, please remain aware that State Route 233 is a very busy highway.

Eagle Lake's serene waters are framed by Cadillac Mountain to the east, Pemetic Mountain and the Bubbles to the south, and Sargent Mountain to the west. A six-mile carriage road circles Eagle Lake and connects with spurs to Bubble Pond, Jordan Pond, Witch Hole Pond, and around Sargent Mountain. Eagle Lake is 436 acres and is occasionally stocked with togue, landlocked salmon, and brook trout by Maine Department of Inland Fisheries and Wildlife.

PARK HEADQUARTERS

Location

Mile 2.7 on left

Parking

A small lot for approximately 10 visitor vehicles.

During the months of November through mid-April, park headquarters operates as the winter visitor center when the Hulls Cove Visitor Center is closed. There is a small book sales area. Not appropriate for tour bus groups. At mile 5.6, Route 233 terminates at State Route 198/State Route 3. To the right the road leads to Somesville and route connections to the west side (Southwest Harbor, Bass Harbor) or off the island.

SARGEANT DRIVE

No buses, recreational vehicles, or commercial vehicles.

Location

Mile 6.8 to the right on State Route 198. Also accessed from Mile 10.5 in Northeast Harbor.

The 3.8-mile-long Sargeant Drive hugs the rocks of Somes Sound, the only fjord along the eastern seaboard. A fjord is geologically defined as a glacially carved river valley drowned by the sea. Characteristics include a southern shallow mouth, a northern deep end, and a shoreline that drops straight into the water rather than slopes.

Across the sound from north to south is:

- *Hall Quarry*: a small community at the base of Acadia Mountain. Area used extensively in the late 1800s and early 1900s for quarrying pink granite.
- *Acadia Mountain*: its east-west trending ridge contrasts with all other mountain ridges on the island that run north-south, typical of glacial carving.
- *Man O'War Brook*: flowing into Somes Sound from Acadia Mountain's base, the brook was named for the French and English warships in the 1700s that would take water on board from the stream.
- *St. Sauveur Mountain*: once called Dog Mountain, it was re-named in honor of the Jesuit colony in 1613, believed to have been established at Fernald Point.
- *Valley Cove*: a small cove with St. Sauveur mountain's steep cliff rising above it, this is a nesting spot of peregrine falcons.
- *Flying Mountain*: a small mountain at the mouth of Somes Sound. Legends claim that it is the top of Acadia Mountain that flew away.
- *Fernald Point*: at the southern base of Flying Mountain, it is the site of archaeological digs unearthing the history of ancient Indians.

PARKMAN MOUNTAIN

Location

Mile 8.1 on State Route 198

Parking

Spaces for 10 vehicles; no bus parking.

Offers access to carriage roads that circle both Hadlock Pond and Sargent Mountain.

NORUMBEGA MOUNTAIN / UPPER HADLOCK POND

Location

Norumbega *mile 8.4* and Upper Hadlock Pond *mile 8.9* on the left of State Route 198.

Parking

Norumbega—paved pull-off on west side of State Route 198; Upper Hadlock—small dirt pull-off at pond's southern end.

Area trails (see page 2-88) are accessed from Norumbega Mountain parking. Upper Hadlock Pond lies to the east of Norumbega Mountain and south of Bald Peak's rounded dome.

BROWN MOUNTAIN

Location

Mile 9.3 on State Route 198

Parking

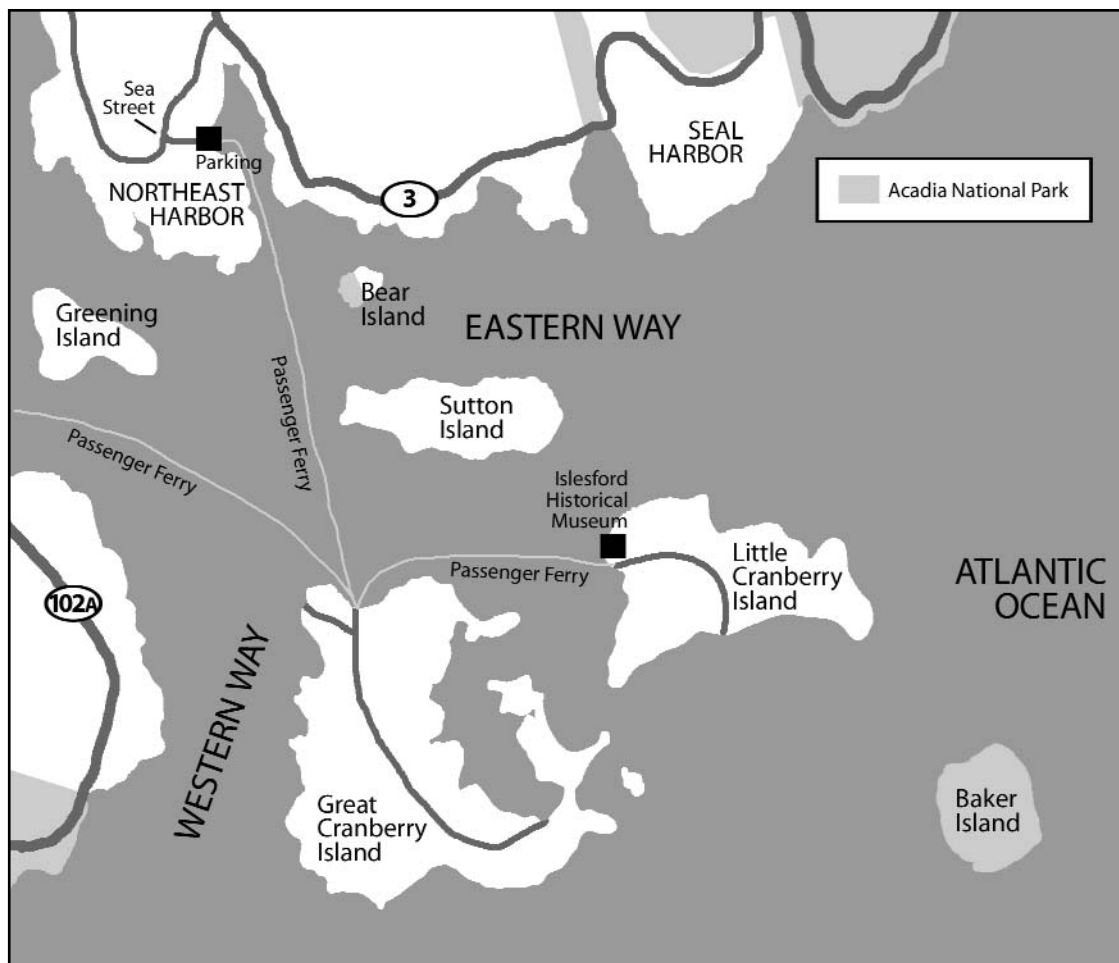
The paved lot has spaces for approximately 25 vehicles.

The parking area is primarily for carriage road access and Sargent Mountain's southern trails. The Brown Mountain Gate Lodge can be seen off of State Route 198. Like the Jordan Pond Gate Lodge built in 1932, Brown Mountain accents the carriage roads while keeping automobiles out. Architect Grosvenor Atterbury's design is an excellent example of French Romanesque Revival architecture styles.

At mile 10, State Route 198 enters Northeast Harbor. A left hand turn from State Route 198/State Route 3 on to State Route 3 leads toward Seal Harbor and eventually back to Bar Harbor.

SECTION TWO – PARK SITES

Chapter Twelve – Islesford Historical Museum





Before You Go – What to Know Islesford Historical Museum

LOCATION

The Islesford Historical Museum is located in Islesford, a waterfront community on Little Cranberry Island.

AREA HIGHLIGHTS

The Islesford Historical Museum

Administered by the National Park Service as part of Acadia National Park, the museum may be visited daily from mid-June to late September. Commercial passenger ferries (mailboat) and tour boats provide regular service from Mount Desert Island. Museum hours vary according to the mailboat schedule. Admission is free.

Little Cranberry Island

An enjoyable walk along Little Cranberry's roads gives visitors a chance to see what life is like on an island today.

TIME ALLOTMENT

Plan for a day outing to visit Little Cranberry Island. On a calm day, the two-and-one-half-mile boat trip from Mount Desert Island to Little Cranberry Island takes approximately 20 minutes. Depending on the season, the mailboat may run between three to six times a day.

- *Islesford Historical Museum*: 45 minutes

PARKING

Parking for the mailboat is at the marina in Northeast Harbor. Access is from either State Route 3 (south) or State Route 198 (south) into Northeast Harbor. Turn left on Sea Street which ends at the parking lot. The lot is extremely crowded and often full on most summer days.

FACILITIES

There are seasonal public restrooms at the marina in Northeast Harbor and at the Islesford Historical Museum on Little Cranberry Island.

ACCESSIBILITY

- The mailboat is accessible. However, it should be noted that at low tide the ramp to the mailboat is extremely steep. At high tide the ramp slope is much gentler.
- The Islesford Historical Museum is not accessible.

SAFETY

Watch footing while on the ramp to the mailboat. Obey signs indicating how many people should be on the ramp at one time.



At A Glance – The Islesford Historical Museum

SIGNIFICANCE

The Islesford Historical Museum collection preserves both documents and artifacts that pay tribute to generations of independent and self-sustaining Americans. On permanent exhibit in every corner of the museum are items—many of them everyday tools of their time—that tell stories about island life: sextant and octants, harpoon gun and ship clocks, ledgers and weights from a ship's store, and the tools of the islandbound tradesmen.

FAST FACTS

- Professor William Sawtelle, a professor from Haverford College in Pennsylvania summered on Little Cranberry Island in the early 1900s. His strong interest in the local maritime history of the Cranberry Islands led to his collection of memorabilia and artifacts. That collection became the Islesford Historical Museum, originally housed in the Blue Duck.
- In 1948, the museum and the Blue Duck became part of Acadia National Park.

PROTECT YOUR PARK – HOW YOU CAN HELP

In addition to following *Leave No Trace* principles, in particular:

- There is no food or drink in the museum.
- Please respect items in the museum and leave museum displays untouched.
- Follow all museum requests.

HELPFUL INFORMATION – ISLESFORD HISTORICAL MUSEUM

Fact Sheets:

Seabirds 3-32

Park History 3-105

Portrait of Three 19th Century Families – The Carrolls, Hadlocks, and Gilleys 3-114



Background Information/Narrative

Islesford Historical Museum/Island Life in the 1800s

As the boat winds through the fishing boats in the protected harbor and approaches the dock, two buildings command the eye's attention. The Blue Duck Ships' Store is a one-and-one-half story, gabled, wooden structure standing where the island meets the harbor. Directly behind the Blue Duck is the Islesford Historical Museum, a one-and-one-half story brick Georgian Revival building. These two buildings, part of Acadia National Park, preserve the memory of those who lived on the Cranberry Isles and those whose lives were tied to the rhythms of the sea.

Off the jagged, rocky coast of Maine lie approximately 5,000 islands ranging in size from ledge outcroppings to the 80,000 acre Mount Desert Island. During the mid 18th century many of these islands began to be inhabited by European settlers eager to take advantage of this interface between land and sea.

Despite hardships, at the time of early settlement in the 18th century, the islands off the coast of Maine were more coveted than the mainland. Islands were easier to hold against attack and they provided their own boundary for keeping livestock—fencing was seldom needed. Island living was also convenient for the many people who made their living by the sea.

Edwin Hadlock, a local entrepreneur who lived on Little Cranberry Island, built the structure known today as the Blue Duck about 1850. He and his sons Gilbert and William used it as a ships' store for at least 25 years. The Blue Duck is an unadorned wood frame structure that represents a simple building style common to maritime villages in the 19th century. After 1875, it operated as a general store. About 1918, Doctor William Otis Sawtelle, a college professor, purchased the building. Sawtelle gave the store its current name, the Blue Duck, after discovering many duck decoys stored there. He painted the decoys Prussian blue and scattered them around the property.

As a summer resident, Doctor Sawtelle became interested in the history of maritime New England, especially Little Cranberry Island, and formed the Islesford Historical Society. By 1919, the Blue Duck was used to exhibit various historical objects and memorabilia collected by the Society. It soon became apparent that the ever expanding and valuable collection required a permanent home. By 1927, under Sawtelle's leadership, friends of the Society contributed sufficient funds to erect a slate roofed brick and granite building—the Islesford Historical Museum.

The people whose stories are told in the Islesford Historical Museum on Little Cranberry Island, are the ones whose lives were part of a growing nation. The occupations represented in the museum are typical of those of the day: schoolteacher, midwife, cooper, captain, homemaker, merchant, postmaster.

SOME ISLAND PEOPLE PORTRAITS

Enoch Spurling (1789-1839) was a prominent mariner and merchant from Great Cranberry Island. While on trips, he sent letters back to his wife Hannah and their children. He worked to separate the Cranberry Isles from Mount Desert Island to make them an independent town. He held several different jobs for the town: selectman, assessor, and town clerk.

Hannah Newman Spurling, Enoch's wife, took care of all the business when Enoch was gone for months at a time. When he died in 1839, she continued to run the business paying taxes, hiring legal help, dispersing proceeds from the shipping business, running the store, and raising the children.

Mary Ann Carroll taught school in the Cranberry Isles. While working, she lived with a local family. During breaks, she returned to the Carroll Homestead in Southwest Harbor. She bought a share in a ship to gain financial independence but the ship was lost.

Hannah Lurvey Gilley, born in Massachusetts in 1782, moved to Mount Desert at age 13. She married William Gilley and had three children. About 1806, they moved to Baker Island and had nine more children. Hannah had a strong education from Massachusetts and taught all 12 children to read, write, and cipher. She died on Little Cranberry Island in 1852.

William Gilley, husband of Hannah, became the first lighthouse keeper on Baker Island. He was given a house, all the sperm whale oil he could burn, and \$350 per year. He lost this appointment when the Whigs took power in 1849. He then moved to Great Duck Island which he had purchased in 1837.

Samuel Hadlock, Sr. lived from 1771 until 1854. He moved to Little Cranberry Island in 1790. He was both a mariner and a merchant and built a ship store on the harbor in the early 19th century.

Samuel Hadlock, Jr., was born on Little Cranberry Island in 1792. He sailed north to the Arctic for whaling and sealing expeditions. In 1821, he recruited a family from a northern tribe to represent an Eskimo family for a traveling exhibition. He toured

New York, Philadelphia, and Baltimore before leaving for Europe. He married **Dorothea Albertina Wilhimina Celeste Russ** from Prussia in 1825. Most island residents called her the Prussian Woman, while Samuel named her Hannah Caroline. Hadlock was lost at sea in a sealing expedition in 1825.

Edwin Hadlock lived from 1814 until 1875. He was the son of Samuel Hadlock Sr., the mariner and merchant who built a ship store on the harbor in the early 19th century. Edwin enlarged the operation around 1850 by building what we now call the Blue Duck.

William Hadlock (1834-1911) served in the Civil War as a colonel in the 28th Maine Regiment. His sword and scabbard are in the museum. He returned home to the family business started by his grandfather.



Before You Go – What To Know Acadia’s Western Side Logistics

LOCATION

The sites on the western side of Acadia are accessed by State Route 102 and State Route 102A. Unlike the Park Loop Road, the western side of Acadia does not include a specified scenic drive, although the surrounding area is picturesque.

AREA HIGHLIGHTS

Details on specific locations and more information can be found in the narrative section.

Echo Lake Swimming Beach

Packed in the summer, this is one of the few island lakes that allow swimming.

The Carroll Homestead Self-guiding Interpretive Trail

The grounds around the “Mountain House,” a homestead dating back to 1825, are open for visitors to explore.

Seawall Picnic Area

Picnic tables, grills, and beautiful ocean views make Seawall an appealing place for picnics or shoreline discoveries.

Wonderland Trail and Ship Harbor Trail

Enjoy the forests and coastline walking either of these trails.

Bass Harbor Head Lighthouse

One of the most photographed lighthouses along the Maine coast.

TIME ALLOTMENT

Estimated driving times are from Somesville where State Route 198 and State Route 102 intersect. Driving times vary depending on traffic, but in general:

- *Echo Lake Beach*: 10 minutes/visit from 20 minutes to all day
- *The Carroll Homestead*: 10 minutes/half hour visit
- *Seawall Picnic Area*: 20 minutes/half hour visit or longer
- *Wonderland Trail*: 25 minutes/30 minute visit or longer
- *Ship Harbor Trail*: 25 minutes/45 minute visit or longer
- *Bass Harbor Head Lighthouse*: 30 minutes/20 minute visit

PARKING

Information about parking at each is located in the Background Information/ Narrative section.

FACILITIES

- *Acadia Mountain Parking*: vault toilet
- *Echo Lake Beach*: changing rooms and flush toilet restroom
- *The Carroll Homestead*: portable toilets
- *Seawall Picnic Area*: picnic tables, grills, and flush toilet restrooms
- *Ship Harbor Nature Trail*: vault toilet
- *Bass Harbor Head Lighthouse*: vault toilet
- *Pretty Marsh Picnic Area*: picnic tables, grills, flush toilet restrooms

ACCESSIBILITY

- *Echo Lake*: There is a steep ramp that leads from the parking lot of Echo Lake to a viewing area on the steps. It does not go all the way to the beach.
- *The Carroll Homestead*: Accessible parking right next to the homestead.
- *Seawall Picnic Area*: Views and picnic tables accessible.
- *Wonderland Trail*: This wide fairly level path does have some roots and rocks but is considered accessible with assistance.
- *Ship Harbor Trail*: Accessible to mud flats.
- *Bass Harbor Head Lighthouse*: Back view of lighthouse available from parking lot. View from ocean not accessible.

SAFETY

- Echo Lake Beach and Bass Harbor Head Lighthouse stairs are steep and can be slippery with sand, gravel, and water. Please use caution.
- Echo Lake parking lot fills by late morning. Please be cautious driving through the lot.
- The roads traveled through the west side are local public roads. Please respect the speed limit in these areas.
- Southwest Harbor's small size has difficulty handling the large amounts of summer traffic. Traffic tie-ups are common in July and August. Please watch for stopping and turning traffic.
- The coast at Seawall is gently sloping, but extremely slippery especially after the tide has just gone out. Wear proper foot wear and tread slowly.

TRAILHEADS AND TRAIL CONNECTIONS

Acadia Mountain Area

- *Acadia Mountain*
- *Valley Cove Trail*
- *St. Sauveur Mountain Trail*
- *St. Sauveur via Ledge Trail*
- *Valley Peak Trail*

Echo Lake Beach Area

- *Beech Cliff Trail*
- *Canada Cliff Trail*

Beech Mountain Area

- *Beech Mountain Trail*
- *Valley Trail*
- *Beech Mountain South Ridge Trail*
- *Beech Mountain West Ridge Trail*

Seawall Area

- *Wonderland*
- *Ship Harbor*

Western Mountains

- *The Perpendicular Trail*
- *The Shuiceway*
- *The Razorback Trail*
- *Great Pond Trail*
- *Bernard Mountain South Face Trail*
- *Cold Brook Trail*
- *Great Notch Trail*



At a Glance – Acadia's Western Side

SIGNIFICANCE

Although divided by local towns and highways, the west side is considered more quiet, and the inter-related quality of town and park offers visitors traditional Maine village flair with towns like Southwest Harbor and Somesville.

Within these lands Acadia protects unusual plant associations of northern and southern plants, rare peatlands, old growth spruce forests and excellent habitat for more northerly bird species. The historic sites of the Carroll Homestead and Bass Harbor lighthouse preserve a piece of coastal Maine history.

FAST FACTS

- The west side of Acadia harbors more early history than the east side because:
 1. Prehistoric Indian sites unearthed at Fernald Point dating back 3000 years.
 2. French Jesuit encampment believed to be somewhere at the mouth of Somes Sound in 1613.
 3. Somesville, called “Betwixt the Hills,” was the first permanent settlement in 1761.
 4. Southwest Harbor had the first steamship wharf in the early 1800s for welcoming the beginning wave of visitors to Mount Desert Island.
- Acadia Mountain's ridge runs east to west, unlike all of the other mountains in the park that follow the usual glacial formation direction of north-south.
- Acadia Mountain and St. Sauveur's slopes hold an unusual plant association of bear oak and pitch pine. Bear oak, common in mid-Atlantic states, is only found in the park on these two mountains.
- The current Beech Mountain Fire Tower was built in 1962.
- Bass Harbor Head Lighthouse was built in 1858.
- Echo Lake's swimming temperature at 65-70 degrees is much more accommodating to swimmers than that of the ocean.

PROTECT YOUR PARK – HOW YOU CAN HELP

Remember to follow *Leave No Trace* principles. In particular:

- At Seawall Picnic Area gulls have become accustomed to being fed. Please do not feed wildlife.
- Dispose of your food and trash properly. Garbage cans have receptacles for recyclables—please use them.
- Do not remove beach rocks or construct “rock art.” They, as everything else in the park, are protected. You are welcome to remove litter however.

MANAGEMENT CONCERNS

Park scientists are concerned about the potential decline of park amphibians. Echo Lake is one area being monitored. Any unusual sightings should be reported to a park ranger or call (207) 288-3338.

HELPFUL INFORMATION – ACADIA’S WEST SIDE

Fact Sheets:

Wildlife 3-3

Keeping Wildlife Wild 3-6

Common Loon 3-31

Seabirds 3-32

Amphibians 3-34

Plant Groups of Acadia National Park 3-43

Acadia’s Common Plants 3-50

Life Between the Tides 3-71

Suggestions for a Low Impact Visit 3-76

Intertidal Animals 3-77

Intertidal Plants 3-79

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Portrait of Three 19th Century Families – the Carroll, Hadlocks, and Gilleys 3-116

Appendix:

Birding on Mount Desert Island (B)

Mountains (D)

Lakes and Ponds (D)

Acadia National Park Timeline (E)

Who’s Who at Acadia (E)

Quotes (E)

Carroll Homestead Interpretive Trail (H)



Background Information/Narrative

Acadia's West Side

NOTE: Park highlights are interspersed between local towns and private property. The primary driving routes are State Route 102 and 102A. Mileage distances begin from the intersection of State Route 198 and State Route 102 junction in Somesville at the stop light.

Beech Mountain area access is .8 mile, just after Somesville. Long Pond Road, just after the Somesville firehouse on the right hand side of the road, accesses the road to Beech Mountain and the north end of Long Pond. Beech Hill Road is 2/10 of a mile on the left, Long Pond is 1.7 miles on the left. At the end of Beech Hill Road is the parking area for Beech Mountain, Beech Cliffs, and the Valley Trail. For more information on Beech Mountain, see below. For more information on area hiking trails see Recreation section.

ECHO LAKE

No planned stop.

Location

Mile 2 off State Route 102, on the right hand side.

Parking

None

Echo Lake practically laps right against the highway at this spot. Across the lake at its southern end is Beech Mountain, a mountain with an addition—a fire tower. The summit of Beech Mountain, fairly free of trees and offering views to the Western Mountains as well as the western slopes of Sargent and Cadillac, served as a good vantage point for spotting smoke. The first fire tower was a wooden structure that was built in 1941. By the 1950s it had deteriorated and in 1962 was replaced with the three-story steel lookout. The tower is only used during periods of high fire danger. In 1993, it was registered as a national historic lookout. Occasionally it is open to the public.

IKES POINT

No planned stop.

Location

Mile 3 off State Route 102.

Parking

Small parking lot for boaters and boat trailers.

Ike's Point offers views of Echo Lake, but is primarily used for those putting in canoes, windsurf boards, and motorboats. There is a 10 horsepower limit on motorboats. Swimming is allowed.

ACADIA MOUNTAIN

No planned stop unless hiking.

Location

- *Mile 3.2 on left:* Man O'War Brook Fire Road; off State Route 102
- *Mile 3.3 on right:* Acadia Mountain parking lot; off State Route 102

Parking

There are approximately 20 car spaces right off the highway.

Acadia Mountain's popular hiking trail provides hikers open views of Somes Sound from its east-west running ridge and offers a lesson in Acadia's vegetation variety. Bear oak (or scrub oak), a small oak of three to nine feet with leaves about two to five inches, grows along the mountain's dry ridges. This tree grows predominantly in the southern coastal plains of New Jersey. Patches of this small oak can be found between New Jersey and Acadia, but here, growing in association with pitch pine, it is a combination uncommon anywhere else in Acadia. This is an example of how more southerly species, like the bear oak, co-mingle with more northerly species in the spruce-fir forest of Acadia.

Acadia's plant diversity is botanically significant. The park's geographic location in a transition zone between northern and southern environments coupled with its maritime environment of fog and humidity, cooler growing seasons and warmer winters, sustain a representative range of 2500 miles of typical plants of the arctic, Canadian zone, and southern coastal plain. This remarkable accumulation in one area is a unique feature of Acadia National Park.

ST. SAUVEUR MOUNTAIN

No planned stop unless hiking.

Location

Mile 3.9 on the left hand side of State Route 102.

Parking

Small circular parking lot.

St. Sauveur Mountain, named after the historic French Jesuit colony believed to have been settled at the mouth of Somes Sound in 1613, is more wooded than Acadia Mountain. Views from its summit are not as expansive. St. Sauveur Mountain has a sheer cliff facing east along Somes Sound. This cliff was a historic nesting site of peregrines prior to the extermination of the species in Maine in the early 1960s. Today, they have returned, nesting at this cliff face once again.

ECHO LAKE

To view beach, you must climb down a series of steps.

Location

Mile 4.2 off of State Route 102; access road leads to beach parking.

Parking

A large lot, it is often filled to capacity in July and August.

Echo Lake is a popular swimming spot in the summer. The beach is perhaps a more restful spot other times of the year. A changing area and restrooms are available. Rising above the west side of the lake are the impressive Beech Cliffs, the southeastern face of Beech Mountain. This is another recent location of breeding peregrine falcons, and the Beech Cliffs trail may be closed when the birds are nesting.

Echo Lake's water quality data, including bacterial testing because of the large number of people using the lake, is collected seasonally. One of the biggest environmental concerns facing park managers is to uncover why mass die-offs of frogs in five wetland sites in Acadia have occurred. Investigators are focusing on studies on the various factors of virus, fungus, and parasites that have been identified. In the early 1990s, here at the Echo Lake site, sixth grade students participating in part of Acadia National Park's environmental education program discovered numerous deformed frogs. The reason for this was unclear. If you or anyone in your group notice any odd-looking frogs, please let a park ranger know.

THE CARROLL HOMESTEAD/SELF-GUIDING TRAIL

Stop if interested in taking the self-guiding trail.

Location

Mile 4.3 off of State Route 102 on left.

Parking

There are 5 spaces and one bus space 1/10 of a mile down the dirt road; accessible parking is another 1/10 of a mile down the dirt road.

The homestead today, surrounded by overgrown lilacs and a scattering of old apple trees in an open field, speaks of a different island time. The Carroll Homestead represents a historic snapshot of a coastal Maine family in the 1800s. Built in 1825 at the base of Dog Mountain (St. Sauveur), the Mountain House would be home to four generations of the Carroll family spanning a century of time between 1825-1917. While the land provided sustenance, the occupations of masonry and sea captain held by the Carroll men allowed for an external income. Most of the Carroll women were tied to the homestead, but some of the second generation women worked as teachers or in factories. Modern conveniences and the appeal of living closer to town lured the last generation of Carrolls away from the Mountain House to Southwest Harbor. The home was used as a summer house and rental by the family until 1982, when they donated it to Acadia National Park. The home is not open to the public (except for special events and on certain days in the summer) but the land provides fodder for the imagination to picture a coastal Maine family in the 1800s. A copy of the trail guide is in the appendix.

SEAL COVE ROAD/WESTERN MOUNTAINS

No planned stops unless choosing to hike.

Location

Mile 5.5 Access is off of the Seal Cove Road on the right side of State Route 102.

Parking

Varies—see information in hiking section on trails.

The most remote section of Acadia National Park on Mount Desert Island, Mansell and Bernard Mountain's main hiking trails, the southern end of Long Pond, and Seal Cove Pond are accessed from the dirt Seal Cove Road. The road connects Southwest Harbor and the rural community of Seal Cove and Tremont on State Route 102. The road is closed in the winter. For hiking trail information, see Recreation section.

SEAL COVE ROAD

No planned stops.

State Route 102 now enters the town of Southwest Harbor, a very congested area in the summer as vehicles creep through the center of town on the two lane road. After passing through Southwest Harbor, at mile 6.8, turn left onto State Highway 102A. The park boundary is crossed at mile 9.5.

The road now winds over a natural seawall built by the sea. During calm waters, it is hard to imagine that many of the jumbled rocks scattered along the shore were tossed here by the ocean. Looking out to the east, closest to the shore, is the backside of Great Cranberry Island. In the distance are Little and Great Duck Island.

SEAWALL PICNIC AREA/CAMPGROUND

Good location for enjoying shore scenery.

Location

Mile 9.9 on State Route 102A; picnic area is to the left, campground to the right.

Parking

Parking for the picnic area is to the left; a smaller parking area is to the right. Vehicles can park on the edge of the rocks in the area to the right.

Seawall Campground is a first come, first serve campground. It is open from late May until the end of September. Seawall has drive-up and motor home sites as well as some walk-in sites. There are no hook-ups.

Seawall Picnic Area is directly across from the campground. Picnic tables set amidst towering spruce with an ocean view are found here. Some tables are directly on the ocean front with minimal shade. Looking to the east is the backside of Little Cranberry Island, to the south is Little and Great Duck Islands, and to the west is Great Gott.

Here at Seawall the waves roll in, sunlight glowing on the crests. Fog enhances the call of the white-throated sparrow and the smell of rugosa rose and spruce. The coastline is rocky but with a gentle slope to the ocean's edge. At low tide large areas of rockweeds are exposed making it a slippery venture for exploration. A close look at the exposed ledge bedrock here shows no signs of the coarse-grained granite of Acadia's mountains. Instead it is a gray rock composed of fine ash and rock fragments of a volcanic source, deposited over 400 million years ago.

FROM SEAWALL TO WONDERLAND

No planned stops.

The dominant tree along the shoreline is white spruce, a northern tree that prefers a cooler growing season. It is right at home along the cooler coast. A distribution map of white spruce shows its primary range to Acadia's north with a thin fingerlike projection hugging the Maine coast. Other coastal loving plants include bayberry and crowberry.

Seawall's interior is mostly peatland. The maritime influence of fog, low clouds, mist, and rain have contributed over thousands of years to create this unusual Acadian feature. Water and nutrients only come from the atmosphere, except for small pockets near ground water sources called lags.

This coastal raised peatland, (meaning its plateau is raised above its margins) represents a special climatic and ecological region. Primarily a northern feature, this peatland is the southernmost one known. This edge designation can serve as an indicator to potential global climate change if certain species begin to disappear. Edged by black spruce, larch, rhodora, and sphagnum moss, the peatland harbors common species like pitcher plants and sundews as well as rare and endangered plant species. There is no access, as constant footsteps will forever change the drainage patterns of the peatland and could contribute to its destruction.

WONDERLAND TRAIL

No stop unless planning on walking one-mile roundtrip trail.

Location

Mile 10.8 off of State Route 102A on the left.

Parking

Small lot for approximately 8 vehicles.

Both Wonderland and Ship Harbor offer excellent opportunities to learn about Acadia's coastal features. The fairly level and wide Wonderland trail begins in a forested wetland before a slight rise to an open ledge dotted with pitch pine. The sound of waves and a bell buoy signal the proximity of the ocean. As the trail opens to the ocean, a beautiful cobble beach lays to the west. With a high storm ridge composed of 70-80% cobbles, the beach has a remarkable diversity of rock types such as pink granite, light and dark gray volcanics, and striped sedimentary rocks. Many a visitor covet these rocks for a souvenir—but they are protected and not to be removed. One cobble removed with each Acadian visitor would quickly change the beauty of this area.

SHIP HARBOR TRAIL

No stop unless planning on walking the 1.6-mile round trip trail.

Location

Mile 11.9 off of State Route 102A on the left.

Parking

Approximately 20 pull-in spots.

The Ship Harbor trail visits mudflats, spruce forests, shrub-covered ledge, and open coastline. The name Ship Harbor stems from a legend of a British ship that made a strategic move into the harbor at high tide—a mistake when it became mired in the mud at low tide.

The area around Wonderland, Ship Harbor, and Bass Harbor is considered one of the best birding locations in Maine. In this area numerous northern species such as boreal chickadees and gray jays are found. Warblers such as the Blackburnian, parula, black-throated green, yellow rump, and black and white frequent these forests. Red and white-winged crossbills can also be found.

BASS HARBOR LIGHTHOUSE

Walk to see lighthouse.

Location

Mile 12.9 State Route 102 A makes a sharp right; turn to the left and drive to the road's end.

Parking

A small parking lot that accommodates about 20 cars.

A well-known and often photographed lighthouse in the Acadia area, Bass Harbor has lit the way since 1858. Lighthouse duty, in comparison to other lights, was not as isolated. Consider life on Mount Desert Rock, nearly 20 miles out to sea, where even soil was brought out to grow vegetables.

Bass Harbor was automated in 1974 but still serves as a coast guard residence. The light can be seen 13 miles out to sea. A trail leads below the lighthouse for the classic view. Be careful—the trail is steep and rocky, and is slippery when wet.

BASS HARBOR LIGHTHOUSE TO BASS HARBOR MARSH

No planned stops.

The view straight ahead (on Route 102A after Bass Harbor Lighthouse) is toward Mansell and Bernard Mountains. At mile 12.4, a left turn leads to the Swans Island Ferry Terminal in the town of Bass Harbor. It is a passenger and car ferry requiring reservations. Swans Island is the second largest island off the coast of Maine after Mount Desert Island and has a sizeable population.

The harbor here is filled mostly with lobster boats giving visitors a view of what one might imagine when they think of coastal Maine. Across the harbor is the town of Bernard.

At the stop sign at mile 13.4, turn right to continue on State Route 102 back to Southwest Harbor. A turn to the left leads to the small community of Tremont. Continuing on State Route 102 through Tremont eventually leads to the other side of the dirt Seal Cove Road, and on to the other park sites of Seal Cove Pond and Pretty Marsh picnic area, before eventually circling around past Long Pond and the Beech Hill Road, ending back in Somesville. Pretty Marsh Picnic Area is set in a deep spruce woods with a steep drop to the ocean. For a quiet spot, Pretty Marsh is the choice!

BASS HARBOR MARSH

No planned stop, although there is a small pull-off on the right side of the road just after crossing the small bridge.

Location

Mile 13.6 on State Route 102.

Parking

Small gravel pull-out on right hand side of road. (This pull-off is at the beginning of the Hi-O road, a dirt road that leads to the group campground at Seawall.)

Wetlands are increasingly important to protect. Estimates range from 60-80% of America's original wetlands, both freshwater and salt, have been lost. One of the parks most significant wetlands is Bass Harbor Marsh, an estuary filled with salt marsh grasses against a backdrop of the western mountains. Salt marsh grasses are not only tolerant of salt, but can also withstand being covered by water for a portion of the day. Statuesque great blue herons stand amidst the grass waiting to spear small unsuspecting fish that mistake the heron's legs for safe place to hide. Other wading birds can be spotted here as well.

Estuaries are a product of tidal ocean water meeting and mixing with fresh water. Bass Harbor's freshwater source is Marshall Brook, a small stream that runs from the Southwest Harbor area. Concerns about potential pollutants from two local landfills leaching into Bass Harbor Marsh require on-going sampling for water quality. Another threat to this system comes from overboard discharge from the harbor. Excess nutrients from both the landfills and the discharge could cause algal blooms to flourish, potentially choking out other vegetation. An overabundance of decomposing algae reduces dissolved oxygen necessary for aquatic life.

The loop around 102A ends at mile 15, returning back to Southwest Harbor.



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SECTION THREE – FACT SHEETS

Chapter Fourteen – Wildlife

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Amphibians

Acadia's Common Reptiles

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Fact Sheet – Wildlife

Wildlife is abundant throughout Acadia National Park, although not always obvious. Many animals are nocturnal or secretive, and therefore go unseen. On closer inspection, however, signs of their presence are everywhere. The protection Acadia National Park provides animals and their habitat allows opportunities to learn more.

From the brook trout breaking the surface of Bubble Pond to the peregrine falcon soaring high over Jordan Cliffs, the land, water, and sky at Acadia are filled with a wide variety of animal life. Some call the park their home, others are simply passing through en route to a far-off destination, but all are closely tied to this unique and fragile environment.

Protecting species hinges directly on habitat preservation and Acadia National Park's role is critical. Habitat loss is the greatest threat to plant and animal species. Changes in the landscape, primarily due to human impact, are the number one cause for a species to become threatened, endangered, or extinct. An endangered species is one in immediate danger of extinction due to low or declining numbers. A threatened species will probably become endangered if current population levels experience any further decline.

An understanding has evolved that the demise of a species is not the only loss—genetic diversity and the species niche in an ecosystem vanish forever. National parks become even more important in the face of such concerns. Without protected lands, the rate of loss might be even greater. Acadia's forested woodlands, shimmering lakes, quiet marshes, bold, rocky shores, mountain cliffs, and coastal islands support a great diversity of animals.

AMPHIBIANS AND REPTILES

The lakes, ponds, streams, and ephemeral vernal pools of Acadia National Park are rich in amphibian life. Eleven amphibian species, including frogs, salamanders, and one toad, have been identified on park lands and three other species have been historically reported in the park.

A visitor does not have to spend much time in Acadia before being alerted to the presence of amphibians by the distinctive chorus of the spring peeper or the guttural croak of the bullfrog. Salamanders find clever hiding spots in wooded areas, wetlands, and streams, but can be seen by the astute observer!

A sunny summer day is a good time to locate the park's reptiles. Five species of snakes, none of them poisonous, might be found warming themselves on a rock,

moving through some brush, or slithering across a carriage road. A painted turtle might be sighted soaking up the sun on a log along a lake's edge. The most dangerous reptile on the island is the snapping turtle. They're named "snapping" for a reason! *For more information, see page 3-34 and appendix B.*

BIRDS

With over 300 bird species identified on Mount Desert Island and its surrounding waters, Acadia National Park is considered one of the premier bird-watching areas in the country. Through the years, park staff and countless amateurs have observed the gradual extension of southern and temperate bird species to the region. Twenty-one species of wood warblers alone have been recorded as breeding in the park!

Acadia's offshore islands are also important nesting grounds for many birds, often marking the southern breeding limit for the species. Due to their secluded location and productive marine environment, the offshore islands administered by the park also serve as a critical nesting habitat for eiders and other sea birds, raptors, colonial birds (herons) as well as providing important wintering habitat for northern shorebirds (purple sandpipers), and harlequin ducks.

Both the swift peregrine falcon and the bald eagle actively use areas within Acadia National Park. Eagles have been studied for several years to determine their breeding activity and population changes, and their response to environmental contaminants and human-caused disturbance. Peregrine falcons have rebounded since being on the brink of extinction in the mid-1960s. The falcons were reintroduced into the park in 1984, and have been returning of their own accord to nest successfully from 1991 to the present. *For information on some common birds, see each specific fact sheet, (pages 3-24 - 3-33). See also appendix B.*

FISH

Historic records indicate that 31 fish species have been encountered in the lakes, ponds, and brooks of Acadia National Park, although only 24 species can be found today. Fifteen of these species are considered to be native, while the remainder are non-indigenous, often the result of stocking programs. The "missing" species are all non-natives that are no longer stocked.

While brook trout, lake trout, landlocked salmon, and smallmouth bass are perennial favorites of anglers visiting the park, many of Acadia's fish are non-game species. The American eel, the banded killifish, and 3 species of sticklebacks are only part of the diversity of freshwater fish varieties found at Acadia. *For information on Acadia's fish, see page 3-39 and the fishing fact sheet on page 4-21.*

INVERTEBRATES

Black flies, mosquitoes, and lobster are perhaps the most-well known of the invertebrates at Acadia with the latter falling in a more loved category by visitors than the first two.

Over a thousand species from 18 phyla of invertebrates have been reported from the park and the Mount Desert Island area. Insect inventories in the late 1940s reported over 6,500 species and subspecies of insects. William Proctor, of Proctor and Gamble fame, conducted this survey of the insects and spiders of Mount Desert Island between 1927 and 1945 “to add to the general knowledge on the insect fauna of a part of the Northeast section of this country.” The thoroughness of his effort is best illustrated by some of his descriptions of collection sites and conditions.

- *October 6, 1927*: Stanley’s Lobster Pound, Seawall. Old lobster, clam shells, and fish refuse.
- *June 25, 1928*: Salisbury Cove. Hatched from fungus found under birch log.
- *June 26, 1929*: Long Porcupine Island, breaking up rotten logs, mostly birch.
- *June 6, 1938*: Bald Mountain. West side of island, sweeping blueberry flowers and wild cherry blossoms.
- *August 29, 1944*: Town Hill cow dung for beetles.

A survey this extensive that is over 50 years old is very rare. There is a proposal to repeat this survey to find out how the insect diversity on Mount Desert Island has changed over the past half century. Such a study would tell about the biological diversity of the coast of Maine, including whether that diversity is increasing or decreasing as pollution and the summer population rise.

MAMMALS

From the big and charismatic, like the red fox or white-tailed deer, to the not so obvious, like the star-nose mole and the masked shrew, it is the diversity of habitat and its protection that allows such a range of species. Acadia is an important laboratory for numerous wildlife research studies that help park managers better understand the forty terrestrial mammal species and twelve species of marine mammals that call Acadia home.

For information on the more common mammals, see each specific fact sheet in this section on pages 3-11 – 3-23. See also appendix B.



Fact Sheet – Keeping Wildlife Wild

Just as wildlife has a niche in the environment, we, too, must find our niche as wildlife observers. We are temporary visitors to the permanent homes of many species and we must ensure that our actions do not interfere with their basic requirements for survival.

KEEP YOUR DISTANCE

Observe animals quietly at a safe distance, allowing them to continue their normal activities. Most animals require a specific habitat for refuge, hunting, and feeding. This is particularly critical during nesting seasons when animals are devoting most of their energy to protecting or feeding their young. Human intrusion may cause serious stress on an animal, forcing it to move to less suitable areas or abandon its young.

Nesting eagles, seabirds, seals, and other marine mammals need at least one quarter mile distance from people and their activities to avoid disturbance. Using binoculars provides a close view and is less stressful to wildlife.

FEEDING WILDLIFE CAN HAVE DEVASTATING CONSEQUENCES

It is tempting to feed a flock of gulls or an engaging red fox. However, this practice makes wild animals dependent on humans and less able to forage effectively for themselves. It also makes them vulnerable to poachers, whom wildlife may see as a source of food. Associating people with food can cause animals to become aggressive, and possibly attack.

Aggressive wildlife cannot simply be moved to more remote areas. Most areas already have established wildlife populations. Relocated animals upset the balance in these areas, putting the relocated animal at risk from predators and competing animals. Some studies indicate that three-fourths of relocated raccoons do not survive. Animals have died accidentally or have had to be destroyed as a result of their dependence on human food. Feeding wildlife can contribute directly or indirectly to the animal's death. All wildlife in Acadia is protected under federal and state laws. It is illegal to feed, harass, or collect wildlife in Acadia National Park.

GIVE ME A BRAKE!

Drive slowly and observe speed limits. This will increase the chance of seeing more animals and gives wildlife a chance to safely cross roads. A porcupine, beaver, or a turtle crossing the road is no match for a speeding car. Be especially alert at dawn and dusk when mammals are most active.

BE A WILDLIFE WATCHER

A duck swimming across a pond, a cedar waxwing feeding its young, or harbor seals hauled out on rocky ledges, are some of the wildlife activities one might observe in Acadia National Park. Seeing wildlife in its natural habitat can be the highlight of a trip. It also allows for the opportunity to gain a better understanding of the animal and its niche in the environment. Ask your students to sharpen their observation skills and follow the wildlife stewardship practices outlined above. This can enhance everyone's opportunity to view and enjoy Acadia's diverse wildlife.

Report the location and condition of injured or abandoned wildlife to park staff. Do not attempt to move an animal. Unaware of your intentions, an animal may try to defend itself, resulting in further injury to the animal or injury to you. In the spring, harbor seal pups are temporarily left on beaches by their mothers, who are feeding nearby. Leave them be. It is illegal to handle these animals under the Marine Mammal Protection Act. Report any harassment of wildlife to park rangers. Call the park dispatch office at 288-8791.

You can also help park staff in protecting wildlife. If you observe an uncommon species or interesting wildlife behavior, please fill out a wildlife observation card at any information center. Your observations may be important to park scientists or resource managers.



Fact Sheet – Wildlife Research

Wildlife research answers questions such as: what are the identifying habitat preferences of selected species?; or, how do species compete? Completed studies let managers understand the species protected by the park, so that decisions, like the rerouting of a hiking trail, have limited environmental impact.

Current wildlife studies, as well as other park research can be found at www.nps.gov/acad/rm/research/htm. In addition to those studies, park staff annually monitor nesting federal endangered peregrine falcons and threatened bald eagles, breeding terrestrial birds, migrating fall raptors, amphibians, and beaver populations.

In wildlife research and monitoring, methods of data collection may be as complex as radio telemetry or as simple as looking for indirect evidence of mammals. The following are some examples of studies and the methods used to gather data.

INVENTORIES ARE THE FOUNDATION

Without basic biological data, upholding the National Park Service's mission of protect and preserve becomes more difficult. Protection relies on information. A careful list of resources -an inventory- adds to the general knowledge of park resources. In particular, inventories allow for managers to: 1) document changes, 2) understand ecosystems, 3) identify sensitivity, 4) prescribe further monitoring, 5) make decisions, 6) influence others, and 7) comply with legal mandates.

A major park inventory on Schoodic Peninsula in the mid-1990s was designed to acquire baseline data since no major biological information was available. Using wildlife census methods, biologists could estimate population size, density, distribution, and/or range of many of Schoodic Peninsula's mammals, birds, amphibians, and reptiles.

Indirect methods of sampling, like identifying signs of mammal activity such as feces, tracks, hair, lodges, and burrows, and by direct observation, provided information about the peninsula's medium to large mammals. Biologists conducted a small mammal population count using live and pitfall traps that were checked daily. Trapping, visual, and auditory searches were used for amphibians and reptiles.

Initial data compared with later data may lead to understanding animal's population growth or decline, associated factors affecting that fluctuation, and potential relationships among different species' populations (example: predator-prey).

WHAT'S WRONG WITH THIS PICTURE? ACADIA'S BALD EAGLES

Recent reproductive failures of up to 40% in the Acadia bald eagle population raised questions about why an area with prime bald eagle habitat and far from pollutant releasing industrial areas could not support healthy bald eagle populations. Suspicions led to potentially high levels of contaminants—mainly polychlorinated biphenyl (PCB)—linked to lowered reproduction.

To learn more, eagles had to be captured by experienced researchers who removed the eagles from their nests. Blood and feather samples were collected and tested for heavy metals and PCB content. As suspected PCB levels were high. What could attribute to this higher level? Banding individual birds could help researchers understand more about bald eagle ranges, habitat use, and longevity. In addition, two adult eagles were equipped with radio transmitters allowing researchers to track the traveling birds daily to help in determining where they fed.

Although a low percentage of banded birds are recovered, that information gives biologists vital information. Anyone finding a banded bird or spotting one should send that information to: U.S. Fish and Wildlife Service Bird Banding Laboratory, Laurel, MD 20708.

FOLLOW THAT DEER – TELEMETRY

White-tailed deer low population numbers were odd considering Acadia's habitat could support higher numbers. Why was this? To answer this question, both adult deer and fawns were tracked using radio telemetry. This method of study aids researchers in learning more about the day to day movements of wildlife and their feeding habits, social interactions, and causes of death. Equipment consists of a directional antennae and receiver, in addition to the radio carried by the animal, whether as an ear tag, collar, or in an ingested form. This equipment is supplemented by binoculars, tape recorder, notebook, maps, and compass.

Radio telemetry was essential for finding the fawns for the study. Researchers first located pregnant collared does ready to give birth. Then once the fawns were born, researchers searched for and collared 29 fawns with collars that expanded and eventually fell off as the fawn grew. Results from the study showed that the deer population was healthy, but numbers were most likely kept down by three sources of mortality: 1) coyotes, 2) domestic dogs, and 3) automobiles.

QUIET WETLANDS – WHERE ARE ACADIA’S FROGS?

Amphibians are good indicators of the overall health of the environment for several reasons: 1) their permeable skin and egg shells make them susceptible to absorption of toxins, 2) their shell-less eggs leave them unprotected from radiation, 3) their complex life cycles force them to come into contact with both land and aquatic environments, and 4) they remain in small areas their entire lives and therefore, their declines may reflect what is happening in that locality.

These above reasons are why the recently discovered mass die-off of specific frog species in five wetland sites at Acadia prompted immediate questions and need for investigation. How did a fungus and certain viral and bacterial strains, never recorded in the United States before, wipe out entire populations of frogs at each site? Is this a naturally-occurring event, or is it the result of environmental degradation? If human-caused influence is involved, is it from a thinning ozone layer or pollutants? A major three-year study will hopefully find answers.

For more information on Acadia’s resource management and research programs, see Resource Management fact sheets, pages 3-81–3-102.



Fact Sheet – Beaver

Castor canadensis

Busy as a beaver is a good description when it comes to the largest rodent native to North America, second largest in the world only to South America's capybara. Beavers have the special ability to make major changes in their environment, altering land to suit their needs. Humans are the only other creature to alter their habitat so much. The range of the beaver covers all of North America, except the extreme north and parts of California, Nevada, Arizona, and Florida. They prefer slow moving streams or rivers bordered by a suitable woodland food source. At Acadia that means birch and aspen forests located near a brook or pond.

An adult beaver averages 3 1/2 feet long and can weigh from 28 to 75 pounds. Their massive skull supports strong jaw muscles capable of dragging trees used for building dams. Its incisor teeth are wide and chisel-like, while its flat molars are used to grind woody vegetation. The beaver's large, webbed hind feet make it a powerful swimmer. Split toenails on the second toe of the hind feet and the small dexterous front feet spread an oil over the body to keep its fur sleek and water repellent. Long, coarse guard hairs give the fur a rich brown color while the paler, compact underfur keeps water from reaching the skin. The large, flattened, scaly tail is used as a rudder and allows the beaver to swim and steer while towing branches and logs. On land the tail props the beaver into an upright position while felling trees. Valves automatically close the nostrils and ears when a beaver submerges and reopen when it surfaces. Beavers can remain underwater for up to 15 minutes. Their lips can close behind the teeth to permit chewing while underwater. A clear membrane protects the beaver's eyes while submerged. Except for vision, the beaver's senses are highly developed.

Beavers are herbivores. They eat the buds, leaves, twigs, and soft cambium layer of bark of certain trees as well as many types of aquatic vegetation including sedges, water grasses, fleshy roots, and water lilies. Beavers prefer small trees but large trees are used too. During autumn, beavers cache a winter supply of branches and logs in the water near their lodge to use when the pond is iced over.

The squat, rotund body of the beaver makes it clumsy on land. Beavers spend much of their time constructing and maintaining their environment. By digging channels, damming creeks, and constructing lodges made of sticks and mud this defenseless, slow moving mammal creates escape routes and shelter. In winter the lodge is frozen hard as concrete and is able to stop the teeth and claws of the strongest and most determined predator.

Between late April and late June an average of 4 kits are born in the lodge. Beavers mate for life and the family unit is centered around the breeding female. When born, the kits are covered in fur and their eyes are open. The characteristic flat tail of the adult is more rounded on the kits. After one month the young are able to eat solid food. The young stay with the family unit for two years and are then driven off by the parents.

The shallow ponds created by these engineers of nature provide valuable habitat for many other creatures; waterfowl come and feed, frogs and insects are both hunter and hunted, and mammals such as otter, muskrat, and moose find a home sweet home. In addition, their dams prevent erosion, conserve water, and increase the water quality of rivers by reducing the amount of silt flowing into them. Active lodges at Acadia vary year to year according to food availability and continued habitat suitability. Ask staff at the visitor center if they are aware of the best locations for beaver watching.

Before Europeans arrived, the beaver population in the United States was estimated at 60 million. During pioneer times, the beaver's valued pelt, musk glands, edible flesh, and the ease of locating and trapping the animal contributed to its decline. They were trapped to extermination on Mount Desert Island and reintroduced in 1920 by George B. Dorr, the park's first superintendent. Since 1930, regulations and protection have allowed the beaver to make a natural comeback. Today it is estimated that there are more than 2 million beavers in the United States. In fact, the beaver is considered a pest in some areas due to felled fruit trees, damaged ornamentals and cultivated crops, and flooded roadways caused by dams. At Acadia, it reaches pest status when its dam causes the flooding of the Park Loop Road or carriage roads!



Fact Sheet – Eastern Coyote

Canis latrans

As the sun sets the coyote begins its evening song. Soon others join in the call. The coyote is one of the fastest mammals in North America, running at speeds up to 40 mph. Coyotes have expanded their range across the eastern United States due to the elimination of wolves and the creation of favorable habitat due to breaking up forests for settlement by humans. They prefer open regions such as farming areas and forest clearings and they have adapted to urban habitats. Their home range is from 5 to 25 square miles depending on habitat quality and food availability.

In 1981, the first documented coyote sighting on Mount Desert Island was recorded. To learn of their relationships to red fox and white-tailed deer on the island, 12 coyotes and 14 red fox were collared and tracked for two years. One radio-collared coyote went from Northeast Creek (off of Route 3 before reaching Salisbury Cove) all the way to the west side of the island, and then swam to Bartlett's Island (an island off of Pretty Marsh on the island's west side), and then back to Northeast Creek.

This opportunistic feeder is both a scavenger and a predator. 90% of a coyote's diet is made up of rodents and rabbits. Such small mammals are usually taken by stalking and pouncing. Coyotes have been seen snatching fish from shallow streams and taking large prey, such as white-tailed deer, by pack hunting. Other foods that comprise their diet include songbirds, snakes, frogs, crayfish, insects, fruits, and plants. Coyotes have been known to prey on livestock. And because of this, farmers and trappers have used every known method to catch or kill this animal. This activity has had little impact on the species. At Acadia, the study concluded that deer were part of the coyote's diet, especially in the winter when deep snow made it difficult for deer to escape. Other food preferences include snowshoe hare, blueberries, and insects.

The coyote is a medium-sized member of the dog family. An adult male averages 4 feet long and weighs from 15 to 50 pounds. Females are about 1/5 smaller in size and weight. Long, slender legs, a tapered muzzle, and large pointed ears give the coyote its characteristic look. The color of the fur varies from buff yellow to grey. Black-tipped hairs give the back, neck, front of legs, and top of the tail a grizzled appearance. The chest, abdomen, area around the lips, inside the ears, and the tip of the tail are creamy white. Their eyes are yellow, like a fox, but their pupils are round, unlike the elliptical pupils of the fox. When running, coyotes carry their bushy tail below the level of their back while wolves hold their tail up above the level of their back.

Although coyotes rarely mate for life, a pair may remain together for several years. A hollow log, rocky ledge, or an enlarged animal burrow, is selected as a den for raising the young. The female will prepare more than one den before the pups are born so that the young can be moved to another den if there is a disturbance. Averages of six young are born during April or May. When born, the pups eyes are closed and they are covered with short, yellow-brown fur. After about ten days their eyes open and they begin to move around the den. The male brings food to the female for the first two months after the pups are born. Some of this food is regurgitated to feed the young during and after weaning. After about eight weeks the pups have been weaned and the den is abandoned. By following along on hunting trips and watching the parents the young are taught to hunt. By the end of the summer the pups are out looking for their own territory or have formed a pack with the parents.

Coyotes can be active at any time during the day, but they are most active in the early morning and at sunset. They lead lives that vary from solitary to sociable and coyotes communicate with one another using a variety of senses including visual, auditory, olfactory, and tactile. The coyote has learned to adjust to rapid changes in its environment, and for this reason this species will continue to flourish and expand its range in the future.



Fact Sheet – Harbor Seal

Phoca vitulina concolor

Harbor seals are playful and inquisitive creatures. A year round resident in the Gulf of Maine, this species is frequently reported and known locally as the common seal. Popular haul-out locations include Egg Rock and Bunker's Ledge, accessible only by boat. It is rare to see harbor seals close to Mount Desert Island shores.

This species basks and sleeps on coastal islands, ledges, and sandbars during low tide. During high tide they can be seen bobbing in the water while foraging for food. Harbor seals are carnivores, with a diet that includes herring, squid, cod, flounder, and several other invertebrates, depending on what they can find. Like other carnivorous mammals, seals are intelligent and have well developed senses.

Their eyesight is keen in water, functional in air, and adaptable to the darkness of deep dives and the dark winter months of northern latitudes. Hearing is acute in both air and water. The sense of smell operates both in the air, as when a mother identifies her pup, and underwater by picking up dissolved molecules from their environment. The nostrils and ears are normally closed and are opened by voluntary muscles only when the head is above water. This energetic predator may consume up to 10 percent of its body weight in fish per day.

Seals move in the water by waving the hind flippers from side to side. Movements on land or ice are awkward, the fore limbs propel the seal forward while the hind limbs are dragged along behind. The harbor seal looks like it's wiggling along on land.

Adult males average 5 feet and 200 pounds while adult females average 4 feet 8 inches and 156 pounds. Females mature first, at 3 to 4 years of age, while males mature at 4 to 6 years of age. Both sexes are similar in appearance. The coat varies from light gray or tan to brown, black, or even reddish, with fine dark mottling on the back.

Pups are born from late April to mid-June, weighing 21 pounds and measuring 2.5 feet on average. Pups are born on land and are able to swim by the next high tide. Nursing takes place ashore or in the water and lasts about 30 days. About 30 percent of the pups die during the first year; some of the causes are abandonment by mother, disease, storms, parasites, and predation by ospreys, black-backed gulls, and sharks. Occasionally, seal pups are found along Acadia's coastline. It is best to leave the pup alone as the mother may return to it. If the pup is there for more than 12

hours, call the Marine Patrol in Ellsworth at 667-3373 or the Marine Mammal Stranding Hotline at (617) 973-5247. Harbor seals have lived 35 years in captivity.

During the late 1800s fishermen complained about seals damaging nets and competing with them for commercial fish. A bounty of \$1.00 per animal was established in Maine. By the early 1900s, harbor seals were nearly exterminated along many areas of the coast with no noticeable effects on fish catches. The bounty was lifted in 1905 and they began to regain their former numbers. In 1972, the Marine Mammal Protection Act prohibited taking harbor seals in the territorial waters of the United States without a permit.



Fact Sheet – Raccoon

Procyon lotor

The conspicuous black mask across the eyes and cheeks and the round, bushy tail of the raccoon make it one of the first wild animals we learn to recognize as children. This clever, curious creature has been known to open coolers, remove trash can lids, and live in chimneys or attics. Campers at Blackwoods and Seawall campgrounds know these creatures all too well. Anyone who has left food exposed for a short period of time will most likely come face to face with this nuisance pest.

The raccoon lives in all 48 of the contiguous United States and its range is confined to North America. It prefers wooded areas along waterways but can be found in almost any urban environment, utilizing sewer pipes, culverts, and drainage pipes for travel to feeding areas. It's one of the few large mammals that have done well in an urban habitat. Raccoon dens are located in tree hollows, brush piles, rock crevices, buildings, or other man-made structures. If an adequate food supply is available, the home range of a raccoon is about one square mile.

Raccoons average 12 to 30 pounds but can weigh as much as 55 pounds and are about 3 feet long. Besides the characteristic mask and ringed tail which ends in a black tip, its fur is long, thick, and grizzled gray in color. The raccoon walks flat-footed, just like humans. The soles of its feet are hairless with five flexible toes and sharp claws which aid it in climbing trees.

Raccoons are omnivores, meaning they will eat anything they can find including garbage. Much of its diet is taken either in the water or along the water's edge. Crayfish, crabs, frogs, fish, and salamanders are favorites. Along the coast, tidepools and mudflats are visited for tasty treats. In addition, they eat almost every edible fruit and nut within their range as well as insects, worms, slugs, snails, sweet corn, small mammals, and birds as large as geese. It is not surprising that an animal with such a varied diet has a brain that is capable of problem solving and learning. Raccoons eat more during autumn than at other times of the year. By increasing their body fat by 50 percent in the fall, they are able to survive the winter months when little food is available.

They have well developed senses of hearing, sight, and touch. Although its rounded ears are small, the eardrums are well developed. Raccoons pay close attention to any noise that sounds out of place in their environment. Being nocturnal, their eyes are adapted to utilize all available night light. Their black, alert eyes also reflect the

raccoon's intelligence and curiosity. Even though the raccoon does not have an opposable thumb, its fingers are so dexterous that it can locate food by touch alone. At one time it was thought that the raccoon always washed its food before eating. Today it is thought that water heightens its sense of touch and for this reason it seems to wash its food.

Averages of four young are born during April and May. At birth, the young weigh only a few ounces and their eyes are closed. After about 2 months, young raccoons begin to leave the den for short periods of time. They remain with their mother during spring and establish their independence in a nearby den by late summer. Yearling raccoons leave the area to go off on their own at about 14 months of age. These black-masked bandits do not hibernate during winter but will stay in their dens for extended periods of time. Raccoons are known carriers of rabies and should not be handled. Cases of rabies have been reported in the Acadia area.



Fact Sheet – Red Fox

Vulpes vulpes

Sleek and sly. Cunning and crafty. These words bring to mind the image of a red fox. Our language has taken on many different meanings when it comes to this wily creature: sly as a fox, foxy lady, outfoxing your opponent. The red fox has one of the largest geographical ranges of any species in the animal kingdom. Beyond America, it is found in Europe, Iceland, India, North Africa, Japan, and even Australia where it was imported during the late 1800s for the sport of fox hunting.

This species prefers to live in open regions such as farming areas, alpine and arctic tundra, meadows, brushy fence rows, woody stream borders, forest clearings, and along beaches bordering large lakes. At Acadia, it is known to visit tidepools for a meal. It has adjusted to living closely with humans and is often seen running across roads. For many years near Sand Beach and Thunder Hole, red foxes learned the fine art of begging for food. Feeding any wildlife is strongly discouraged by park staff, and in this case, led to the removal of the individual foxes in that area. The size of the home range of the red fox is influenced by habitat quality and food availability. In ecologically diverse habitats, red foxes may live in an area as small as 140 acres. Where less diverse habitat exists, they may require two to three square miles to fulfill their needs. At Acadia, studies indicated that with the arrival of the eastern coyote, the red fox territories fell in between coyote territories.

Long-legged and built for speed, the red fox is as handsome as it is swift and cunning. A thick, full coat makes the fox appear much larger than its 9-12 pounds. A bushy tail makes up half of the total length of its 3 foot body. Although its coat varies in color from deep, russet red to sandy blonde, the legs, feet, and back of the ears are usually black. The pupils of the fox's eyes are elliptical, more like a cat's eyes. This adaptation lets more light filter through the pupil allowing the fox better vision for night hunting. Their teeth add layers continuously to compensate for the wear and abrasion of gnawing and chewing. Its hearing is so sensitive that it can follow the footsteps of a mouse concealed under vegetation or snow. The red fox's nose is estimated to be 100 times more sensitive than that of humans.

The diet of the red fox is limited only by what it can catch or find making it an omnivore. Its preference is for small mammals such as mice; but frogs, insects, birds, bird eggs, snakes, carrion, and plant material such as acorns, grasses, and fruits are often eaten. Like their cousins, wolves and coyotes, foxes often bury any food they can not eat right away.

Unlike their canine cousins, foxes are solitary and hunt alone except during the breeding season. Foxes tend to mate for life. The dog, male, and the vixen, female, find each other and pair up in mid-December after having lived alone since the last family unit broke up the previous fall. The pair will stay together until early fall when the pups and parent each go their own way.

The vixen chooses an abandoned animal burrow to raise her young in. After a little remodeling and enlarging the den is ready for an average of five pups to be born during March or April. The dog remains outside, leaving food by the entrance of the den. The pups grow quickly and soon the parents begin to bring them half-dead animals to play with. This “playful hunting” teaches them the skills they will need for survival.



Fact Sheet – Red Squirrel

Tamiasciurus hudsonicus

Red squirrels are very easy to observe at Acadia. Simply hiking in the vicinity of one will elicit a scolding. Dismantled red spruce cones littered on the forest floor are further evidence of the red squirrel's activities.

Red squirrels are high energy animals. Where some squirrels are shy and secretive, red squirrels are bold and aggressive. It is not hard to picture a red squirrel displaying displeasure with an intruder by foot stamping, tail flicking, and chattering. They are noisy and seem to be constantly on the move. This arboreal kamikaze runs through trees at high speeds, leaping from branch to branch, and dropping spread eagle to the ground. Its small size, white eye ring, tufted ears, black lateral stripe, and reddish coat and tail make the red squirrel easy to distinguish.

Being a tree squirrel, it inhabits northern cone-bearing evergreen forests, mixed conifer and hardwood stands, and, sometimes, pure deciduous hardwood forests. Their range extends from tree line in Canada and Alaska southward as far as New Mexico and Arizona and in the higher mountains of the south. Red squirrels are not highly social. They are solitary but use a home range which is partly shared with others. Both sexes are territorial and defend their territories against intruders by using at least four different vocalizations during encounters.

Because of their high metabolism, red squirrels require a diet high in energy content. They are opportunistic feeders and rely on seasonal foods in addition to the year round supply of acorns, conifer seeds, and nuts from the autumn harvest. They are more carnivorous than other tree squirrels, eating insects, bird eggs, and nestlings. This species has even been known to rob meat used to bait traps. They gather bushels of cones and store them in huge piles, called seed middens, which can be three feet deep and several yards across. Since they do not hibernate in winter, caching seeds and fungi in tree hollows that are dry and protected provides a steady food supply during the winter months.

Red squirrels have two litters each year. The young are born and reared in a tree cavity or hollow trunk. If a den is not available, the female will build a round leaf nest in the branches of a tree. At Acadia, nests are made from twigs, cedar bark, and Old Man's Beard, the stringy lichen found growing on spruce tree branches. A single litter may contain four to seven young. At birth, they weigh half an ounce, their skin is pinkish, and their ears and eyes are closed. After about five weeks their eyes open

and at six weeks the ear canals open and fur covers their body. The young squirrels stay with their mother about three months or until she has a second litter.

Red squirrels become inactive for short periods of time in winter to avoid cold temperatures and storms. In spring, seeds left behind in caches sometimes sprout, making the red squirrel a beneficial forester of the woods. These acrobats of the forest are fascinating to watch as they scurry through the trees.



Fact Sheet – White-tailed Deer

Odocoileus virginianus

White-tailed deer are extremely plentiful in the United States. Population estimates are at 12 million. The proximity of agriculture and forested areas provides abundant habitat for white-tailed deer and is one reason for their large populations. Deer, under good conditions, eat about 2.5 lbs of food a day. The preferred browse in Acadia National Park is cedar and certain species of pine, maple, and birch. In addition, acorns, apples, alfalfa, and clover are favorites. During winter months feeding is at a minimum and deer are often found in groups.

The results of the previous November's mating season are evident as does give birth, usually to twins, in May or June. To protect the young, the mother finds a safe and densely wooded area where the young's protective white spots mesh with dappled sunlight on the forest floor. Fawns barely move until 8-10 days old. Their ability to remain still is their most important survival tool until they are able to run to escape danger. Does, attempting not to draw attention to the young, will leave for two to eight hours at a time to forage, and return only to nurse each fawn for a few minutes. People who stumble across fawns may mistakenly believe they have been abandoned and try to take them—usually to the detriment of the fawn. Deer are reproductively mature by one and a half years, and in their prime reproductive years until they are eight years old.

White-tailed deer populations at Acadia National Park have fluctuated in the past half century. Prior to the fire of 1947, which burned over 17,000 acres on Mount Desert Island's east side, Acadia's deer herd was smaller than a few years after the fire. This increase resulted from the replacement of the predominant spruce forest with a forest abundant in the favorite food of deer—certain species of deciduous trees (such as birch) and shrubs. In time, these forests changed again due to the natural progression of succession. Finding browse for the larger deer herd became more difficult, resulting in overbrowsing and malnourishment. The population stabilized toward the end of the 1960s due in part to a selective hunting program in the park. The program ended once the deer herd was considered healthy.



Fact Sheet – Bald Eagles

Haliaeetus leucocephalus

Bald eagles, our national symbol, give each of us a sense of the wild. They are large birds with a wingspan of up to seven feet. Their characteristic white head and tail set them apart. “Bald” comes from an old English word meaning white. Their Latin name, *Haliaeetus leucocephalus*, means white-headed sea eagle. This characteristic trademark does not appear until they are between four and six years old.

Keen eyesight and huge talons assist in searching for their primary food—fish. Bald eagles also eat carrion and occasionally bully other birds to abandon food. On the coast of Maine, the majority of their diet is seabirds. Their preferred habitat is forested shoreline along open water. Eagles are found from British Columbia and Alaska, across Canada, and down towards Florida. In Maine, the highest concentration is along the rocky coastline.

Eagles build large nests of sticks, known as aeries. Look for an eagle’s aerie just below the crown of trees or on a ledge. Each year eagles return to the same nest site, adding more sticks. Some nests may eventually measure up to eight feet in diameter and 10 feet deep. Eagles raise one brood each year consisting on the average of one or two chicks. Both parents share in incubating the speckled white eggs for approximately 35 days. The white downy young rapidly grow to match their large “beak and feet” size.

It can take up to four months for flight feathers to develop on eaglets. Feeding occurs several times a day during this time. As the eaglets grow and strengthen, the parents provide whole prey for them to tear up. Wing flapping practice begins as they approach the date of their first flight. Imagine the eagle’s amazement once they are airborne! Usually only one eaglet from the nest will make it to adulthood. Their life span may be as long as 30 years.

A milestone for bald eagles, as well as an outstanding achievement for the Endangered Species Act, was their removal from a federally endangered species to threatened on July 4, 1995. Populations are doing well in many parts of the country although habitat destruction and shooting continue to cause problems. Persistence of environmental contaminants like heavy metals (lead, mercury) and organochlorines (synthetic chemical compounds like DDT or PCB’s) also continue to cause concern. In Maine, bald eagles are still endangered.



Fact Sheet – Peregrine Falcons

For centuries, peregrine falcons hunted the skies of the world, displaying their impressive, in-flight hunting tactics. Imagine this crow-sized raptor flying high above its quarry, then diving (stooping) to attack prey at a speed of more than 100 miles per hour! Imagine the prey being struck to the ground or even killed in flight by the tremendous impact from the peregrine tail-chasing a dove between Dorr and Cadillac Mountains!

By the mid-1960s, researchers determined peregrines were no longer a breeding species in the eastern United States. Today several subspecies of peregrine falcons are endangered.

Nest robbing, trapping, and shooting first contributed to their downfall, followed in the 1950s by ingestion of chemical pesticides and industrial pollutants. Occupying a position high on the food chain, peregrines are still exposed to high levels of chemical residues if they migrate to or eat migrant song birds from countries using pesticides now banned in the United States. As in all birds of prey, ingested chemical toxins accumulate in their bodies causing reproductive failure, leading to the decline and even eventual extinction of the species.

When Congress passed the Endangered Species Act in 1973, mandating all federal agencies to protect endangered species and their habitats, Acadia National Park responded enthusiastically by participating in a cooperative management plan to restore a self-sustaining population of peregrines to the eastern United States. The Eastern Peregrine Falcon Reintroduction Program's goal is to restore the peregrine population to 50 percent of the 350 pairs estimated to have been present in the Eastern United States, during the 1940s.

The method used to increase falcon populations is the reintroduction of captive-reared chicks into the wild. This process is termed "hacking." Acadia first participated in the hacking program in 1984. Selected adult birds are bred in captivity. The eggs are incubated and hatched in a laboratory. Chicks three to four weeks old are transferred to a location, called a hack site, where scientists hope to establish a new falcon territory. Once there, they are kept several weeks in a protective wooden box with a view of the area to prepare them for release.

Hack sites are staffed around the clock by trained specialists who carefully monitor, tend, and feed the chicks for approximately three weeks. Attendants observe only from a distance at this time. Food drops are made via a long, sloping tube,

preventing the association of food with humans. When their wings are strong enough for flight, fledglings are released. The young falcons continue to eat at the hack site until they learn to hunt on their own.

Peregrines nested on Mount Desert Island at least as long ago as 1936; the last known nesting pair was reported in 1956. From 1984 until 1986, 22 peregrine chicks were successfully hacked in Acadia National Park from a high cliff face overlooking Jordan Pond. Adult peregrines often return to areas near their original hack sites. Acadia discontinued the hacking program in 1987 when adult peregrines returned to the area, for it was feared these adults would prey upon any released chicks.

From 1987 to 1990 adult peregrines returned to Acadia but did not produce young. 1991 marked the first successful nesting at Acadia in 35 years. Peregrines have returned to raise three to four chicks each year since then. Since 1995, a second pair of peregrines has nested on the west side of the island. In 1997, a third pair raised three young on Jordan Cliffs.

In 1993 and 1994, the chicks were banded to learn more about peregrine migration, habitat use and longevity. One of the chicks banded in 1994, a female, has nested in New Hampshire. Another is nesting in Boston.

Each year, in early spring, park resource managers watch intently for signs of returning peregrines. If mating or nesting behavior is suspected, certain trails may be temporarily closed to avoid disturbance to the nesting area. These measures are helping this magnificent falcon in making a triumphant comeback in Acadia National Park.

BEHAVIOR

Feeding: Hunts most vigorously at dawn and dusk in open areas; shores, marshes, and valleys. Hunting often accompanied by a series of sharp, aggressive, territorial calls, “kee, kee, kee, kee, ekk, – kee, kee, kee, kee, kee.” Plucks feathers from the prey as it feeds.

Strikes: Usually in mid-air, knocking the quarry to the ground. Less commonly, it will strike and grab prey and fly away.

Nesting: Mostly on precipitous cliffs, but will also nest under suspension bridges and atop tall city buildings. Eggs are laid on a sand or gravel covered ledge that has been scratched in preparation for the clutch. This area is called a scrape.

FIELD MARKS

Wings: Long, pointed, sickle shaped. All falcons in a dive appear to have sickle shaped wings. Wing shapes depend on the degree to which the bird is soaring or diving. Be careful in making identifications.

Head: Small with dark “sideburns.”

Size: Crow-sized, female larger than male.

Feet: Large (hence the nickname big-footed falcon). Adult: yellow. Immature: light green.

Plumage: Adult: white breast, dark gray back; Immature: streaked breast, brown back.

You can help protect and promote conservation of peregrine falcons in Acadia by:

- Learning characteristic field marks and behavior to make a positive identification.
- Reporting your sightings to any park information station.
- Keeping away from areas where peregrines are nesting and reporting any person who fails to do the same. Avoid observing the birds from a location higher than nest site. Adult peregrines generally won't tolerate people above them and may dive at intruders, particularly if they are defending a nest or chicks.

PEREGRINE WATCH: WHAT TO LOOK FOR AT THE NESTING CLIFF

March to mid-April (courtship): Adult falcons fly close to each other near the nesting cliff, feeding each other, and perform in-flight acrobatics. The falcons are most vocal at this time. Typical breeding vocalizations are: “chup, chup, chip” or “Eeee, chup, chup, chup, chup.”

Mid-April through May (nesting): One falcon incubates eggs while the other perches nearby. Adults may exchange food in mid-air.

June: In early June, young falcons may be seen at the edge of the nest cliff as “tiny white snowballs.” Their markings will change as they mature. They may flap their wings to build strength for flight. They take their first flights in late June or early July.

July through August (fledging): Young falcons practice flight, exploring farther a field. Watch for them flying above the cliff or other parts of the island. They may perch anywhere on the cliff's ledges or on dead trees.

Fall and Winter (migration): Peregrines from Greenland and Canada migrate through Mount Desert Island from August through October. Some may spend the winter on Mount Desert Island depending on the severity of the winter or the availability of prey.



Fact Sheet – Raptor Migration and Hawk Watch

The summer rushes by and suddenly it is September. Just as the peregrine falcons are preparing to leave, another raptor watching opportunity arises: It's the Hawkwatch!

Throughout the fall, a variety of birds of prey—eagles, hawks, falcons, osprey, harriers and owls migrate over Acadia on their way south. From September through mid-October, park staff maintain an observation site on Cadillac Mountain to identify, count, and discuss migrating raptors. Visitors are welcomed. Call park headquarters at 288-3338 for more information.

All raptors are characterized by binocular vision, sharp scimitar-like talons, and a hooked beak. These attributes enable raptors to locate, catch, and tear prey apart with deadly accuracy. Raptors likely to be seen in Acadia range from the robin-sized American kestrel to the bald eagle with its eight-foot wingspan.

Why Acadia? One reason is that millions of birds of all kinds travel over the Mount Desert Island region from northern breeding territories to southern wintering grounds during the fall. To opportunistic raptors, these other migratory birds are an immense food source.

Topography is also essential to the dynamics of hawk migration. Many raptors are able to soar high on rising pockets of warm air created by uneven surface heating. To avoid traveling over water, where such "thermals" are unavailable, many southward-flying hawks turn and follow Maine's east-west trending coast right over Mount Desert Island. Acadia's mountains force prevailing winds into updrafts which the light-weight birds ride to elevations where they can glide effortlessly for miles.

The park's mountain slopes provide an especially good location for observation. You don't have to be a scientist or hawk identification expert to enjoy this spectacular autumnal parade, as thousands of visitors have learned. But amidst the excitement, conservation, and camaraderie common to any shared experience of nature's beauty, Acadia personnel keep records that contribute to a national effort to monitor and conserve raptor populations.

The counting of raptors contributes to conservation measures trying to offset habitat destruction, pesticide poisoning, illegal trapping for sale, and illegal taxidermy trade. The count creates an understanding of critical habitats, population trends, and increases public appreciation. An outgrowth of this important work is the fascinating knowledge gained about hawk migration dynamics.

A sampling of birds seen and counted September 16, 1997 during a six-hour time period:

- Sharp-shinned Hawk: 46
- Coopers Hawk: 1
- American Kestrel: 129
- Merlin: 5
- Peregrine Falcon: 1
- Broad-winged Hawk: 32
- Osprey: 3
- Northern Harrier: 4
- Unknown Raptor: 13
- Bald Eagle: 3
- Turkey Vulture: 2

In 1997, Hawkwatchers counted 2,735 hawks and falcons. On big days, up to 242 raptors were counted. They averaged seeing 15 raptors per hour over 186 hours of observation. Most commonly seen birds were sharp-shinned hawks (1,179); American kestrels (794); and broad-winged hawks (202). In 2001, the 7th year of the Hawkwatch, 3,545 raptors from 12 different species were identified.



Fact Sheet – Common Loon

Gavia immer

The common loon is a large swimming bird. This powerful swimmer can stay submerged for several minutes and cover hundreds of yards during a single dive. Loons are long, slender, and streamlined with legs attached to the rear of their body and webbed feet that serve as efficient propellers. They have a stout, dagger-like bill, relatively solid bones, and float low in the water. Their eyes are adapted for both aerial and underwater vision. These characteristics enable loons to pursue and catch fish underwater.

A “preen gland” located on the rump at the base of the upper tail feathers secretes an oil that is worked into the feathers with the bill and is essential in preserving the feathers. Apparently, the oil has many functions: to help keep the feathers flexible and waterproof and to inhibit the growth of fungi and bacteria.

The yodel, or call, of the loon has a haunting quality that is difficult to describe and hard to forget. This call signals territorial ownership of an area. Loons are known to claim and defend one lake as their breeding territory. If the lake is large enough, more than one pair may take up residence with each pair staying on its own turf.

Loons breed during the summer in freshwater lakes and ponds. Working together, the male and female build a platform type nest out of aquatic vegetation. One to three eggs are laid from mid-May to late June with both sexes incubating the eggs, in turn, for about 29 days. Both parents help in raising the chicks, feeding them small whole fishes, crustaceans, and bits of plants. Loon chicks take to the water within hours of hatching, and when alarmed will crawl up onto their parents back for a free ride and better protection. Besides a suitable nesting site, common loons also look for a “nursery” pool. This pool contains water clear enough for the chicks to spot their prey, shallow enough to limit the size of predatory fishes and turtles, and rich enough to supply the chicks with food for eleven weeks.

A graceful bird on water, the loon becomes clumsy on land and can barely waddle along. It is impossible for them to take flight from land and even from water they need a long takeoff. In winter, when the lakes and ponds freeze over, common loons move to rivers, tidal bays, and the open ocean along the Atlantic coast. In the Acadia area, from a distance, they can be mistaken on the ocean for cormorants. The loon’s profile is more parallel to the water than the cormorant, and the loon’s body sits higher in the water. Today, loon nesting areas are threatened from the wake of motorboats on lakes. Boats on Acadia’s lakes and ponds are restricted to 10 horsepower motors.



Fact Sheet – Seabirds

Acadia's numerous land holdings also include many off-shore islands that are critical habitat for nesting seabirds and sea mammals. These seabirds, which lay only a small number of eggs, can nest on exposed rocky ledges, in crevices, burrows, or in vegetation. Breeding on these islands is one strategy to protect them against predation. Many have lifespans of 20 to 30 years. Although they live in social groups, most are monogamous. Monogamy suits the demands of raising chicks with voracious appetites as both parents are needed for foraging and protection. While avoiding large terrestrial predators by nesting on ledges and islands, predation trouble still comes for many seabird eggs and chicks from gulls and bald eagles.

Disruption to nesting sites occurs when people do not use caution. Nesting islands should not be visited from April 1 to August 15 and many federal and state-owned islands are closed to the public. Even well-meaning visitors can frighten birds, causing them to abandon their nests, leaving the eggs and chicks open to predation.

DOUBLE-CRESTED CORMORANT

Phalacrocorax auritus—Often seen on rock ledges with their black wings outstretched like laundry lines, cormorants are a relative of the pelican. When swimming, cormorants can be identified by their long curved neck rising from the water while their body almost entirely disappears. Their slender bill is held upright at a slight angle. They are well adapted for diving for fish and can swim underwater in search of their prey, sometimes up to 100 feet.

COMMON EIDER

Somateria mollissima—The male eider duck is primarily white with striking black markings on its sides, tail, and top of its head. It is often seen floating with many other males in large rafts. Female eiders, which are a mottled brown color, build nests on islands in colonies with other eiders. Eiders seem to prefer islands where gulls already nest, despite the fact that gulls prey on eider eggs and chicks. After laying four to six eggs, the females incubate the eggs for 25 days, never leaving the nest. After the eggs hatch, the young eiders have a perilous journey to the water. Great-black backed gulls prey on the chicks and many do not make it to the water. Once there, they are protected in creches with one dominant female who is not necessarily the mother of the chicks. Twelve to 15 chicks can be seen following this one female. Other females become peripheral females in the group.

BLACK GUILLEMOT

Cepphus grille—A relative of the puffin, visitors have a much better chance of seeing this little bird on a local boat cruise. Guillemots are small black birds with a conspicuous white patch on each wing. Red feet and legs and a bright red mouth interior are striking. They sometimes can be seen “flying” underwater using their wings to help swim. Their nests are in crevices, under boulders or cobbles, or on rocky ledges. They only lay one to two eggs.

HERRING GULL

Larus argentatus—This is the most common gull, easily identified by its gray wings and black wing tips. A red spot on their bill is a visual cue for the young who peck at it, causing the adult to regurgitate food for the chick. They build shallow nests from grass and seaweed in the open where they have a view of their surroundings. Two to three eggs are usually laid. In the early 1900s gull numbers declined dramatically from hunting and egg collecting, but today there are over 200,000 breeding pairs off the coast of Maine. They are considered a nuisance bird because they take advantage of any food source, like garbage dumps and visitors who are unaware that the birds should not be fed, and in turn, are predators on other seabirds.

GREAT-BLACK BACKED GULL

Larus marinus—This seagull is much larger than the herring gull and has a wingspan of up to 65 inches. It is characterized by its black wings, giving it the name “ministers” of the coast. This gull was completely exterminated off the coast in the 19th century, not re-colonizing again until 1926.

OSPREY

Pandion haliaetus—Also known as a “fishhawk,” osprey have a remarkable ability to sight fish from 30 to 100 feet above the water. They dive from mid-air and grab the fish in their sandpapery talons, turning the fish head to the front so it is more aerodynamic. Ospreys have a brown mottled appearance with a white head and a dark band by its eye. When in flight, the white underside of each wing is visible and forms a slight “v.” They have a large wingspan of up to six feet. Nests, preferred on ledges or platforms are built by the male and female together and are continuously used. One, on the side of Sutton’s Island just outside of Northeast Harbor has been in existence for decades. Two or three eggs are laid and the young are ready to fly around 7–8 weeks old. By 10 weeks they are ready to try fishing. Pesticide use in the 1950s and 1960s, particularly DDT, weakened the shells of these birds as well as other raptors like the peregrine falcon and bald eagle, causing their population to decline. Today their numbers have rebounded.



Fact Sheet – Amphibians

To learn about amphibians here at Acadia National Park, one needs only to venture into the park with a receptive alertness. Crouched by the edge of a pond, one can watch a multitude of shimmery tadpoles dart by. The banjo plucking sound of a green frog can be heard in the park's marshes. Currently, 11 of the 19 amphibians identified in Maine (frogs, toads, and salamanders) are found in Acadia National Park. Although Acadia's geographic location and weather extremes present many challenges for amphibians, the park's protected diverse freshwater habitats are ideal for these water loving creatures.

Amphibians have a permeable skin which allows water to easily move into their body. Any excess is eliminated through the kidneys. While most have lungs or gills for breathing, all amphibians use their skin to take in some oxygen. When visiting a pond at Acadia, you may see frog throats rhythmically expanding and contracting. They are pushing air in and out of their bodies, exchanging oxygen and other gases. This adaptation is good while in an aquatic environment but can cause problems while on land. To avoid drying out, amphibians seek out shady and wet areas.

Water also plays an important role in amphibian reproduction. Amphibian egg shells, like their skin, are permeable. If the eggs are not kept moist, the embryos inside easily dry out and die. For this reason, most species still return to water or a very moist environment to breed.

A spring evening in Acadia's wetlands is often accompanied by a chorus of male spring peepers and wood frogs all vying for attention from the opposite sex. For many amphibians, the mating season is in the spring. Adults begin migrating to their breeding waters. For those who live in or near water all their lives, such as the bull frog, the trip is short. For others, however, migration may require crossing busy roads to get to their breeding pond or stream.

Once the larvae emerge, they are well adapted to a watery life with gills for breathing and a tail fin for swimming. They spend most of their time eating and eventually develop their adult characteristics. For most amphibians, the change from larvae to adult is complete after about 12 to 16 weeks. In areas where temperatures become very cold and ponds may freeze over, some amphibians overwinter in their larval stage. The bullfrog tadpole, for example, may overwinter two or three times before it becomes an adult frog.

In temperate places, such as Acadia, where summers are warm and winters very cold, amphibians must hibernate to survive. In the fall, as the temperatures decrease, amphibians burrow below the frostline or in the mud of a lake or pond. During this time their heartbeat and respiration are slowed and the little oxygen needed is absorbed through the skin. As daylight hours increase and temperatures rise in the spring, amphibian activity increases, hibernation is broken, and these creatures must come to the surface once again.

National parks, no longer immune from the effects of human activity, are in an important position to lead amphibian research and to provide information regarding this possible decline. The preserved ecosystems of national parks are crucial ground for amphibian monitoring.

DID YOU KNOW?

- The red-backed salamander is the most common vertebrate in Maine. It has been estimated that at 1/4 oz. each there are 63.2 million pounds of salamanders crawling around Maine. Compare this to about 20 million pounds of moose at 1000 lbs a piece.
- The bullfrog is the largest North American frog with a record length of 8 inches.
- A single male spring peeper repeats his call about 4,500 times at night. It is rare to see a spring peeper—after all, they are only the size of your thumbnail.
- Pickerel frogs are medium-sized frogs that are common and are distinguished by their squarish dark spots in two or three rows on their greenish to brown bodies.
- Northern dusky salamanders are 2 to 4-1/2 inches in length. Half of that length is their tail! They are a mottled grayish-brown color and are often found close to running water.

AMPHIBIAN WORRIES

Mass die-offs of multiple frog species discovered at five wetland sites in some of the most pristine park areas in 2001 have park managers concerned, including about the long-term survival of these amphibians. Five different viruses or fungi that killed large numbers of spring peepers, bullfrogs and green frogs, mostly in the egg or tadpole stage of development have been identified.

Entire populations of spring peepers, a small tree frog, were destroyed at two park sites in 2000 and 2001 by the virus irido (the nation's first documented case). Massive bruising and bleeding occurred, and a year's worth of eggs were lost. Because spring peepers live only three years, there could be a fatal interruption of breeding adult spring peepers at the site because of the egg loss. A fungus called

ichthyophonus caused a mass die-off of bullfrogs at two of the five sites in Acadia. The fungus has been known to kill massive numbers of bullfrogs, but it's more commonly the cause of massive fish kills, particularly mackerel. The samples taken from Acadia revealed telltale signs of the fungus: huge lesions on the internal organs, particularly the liver and intestines.

Ribeiroia, a parasite, caused a massive die-off of both bullfrogs and green frogs at another site, and another parasite called propozoan was found in "vast concentrations" in wood frogs at yet another site.

The most important task researchers must first accomplish is to gather baseline data so they have something to measure and compare their findings against. A critical part of establishing the baseline information is to reproduce the diseases found in the Acadia frogs in healthy samples so that researchers can study the progression of the diseases and hopefully learn what triggers them and why.

At Acadia National Park, biologists are interested in assessing the park's current amphibian population and condition. Potential future declines would be difficult to document without accurate records. Studies are critical considering five wetland sites in the park have had documented mass die-offs of certain frog species.



Fact Sheet – Acadia’s Reptiles

Reptiles seem to be secretive animals in part because of their cold-blooded nature that fluctuates with the surrounding air temperature. They are represented at Acadia by five species of non-poisonous snakes and two species of turtles. During the warm months you may discover some of these shy animals sunning themselves on a rock or log. Colder temperatures force them into burrows under mud, rocks, or earth.

In addition to being cold blooded, reptiles lay eggs with leather shells or give birth to fully-formed young, breath with lungs, have a covering of scales, and either have no legs (snakes) or four legs with clawed toes (turtles and lizards).

EASTERN MILK SNAKE

Rows of reddish-brown patches line the tan to pale gray snake. Two to three feet long, it can be found in woodlands, where its coloration helps in camouflage.

EASTERN GARTER SNAKE

This very common snake can be black, brown, or olive with three lengthwise stripes of various colors—like yellow, green, or brown. Meadows, woods, marshes—the garter snake is found in a variety of Acadia’s habitats. It is usually one to two feet in length.

EASTERN SMOOTH GREEN SNAKE

The name of this snake aptly fits its description. It is a bright green snake with a much lighter underside of white or pale yellow. Small in size, it is only one to one and a half feet in length.

RED-BELLIED SNAKE

The dark gray to black upper body is under laid with a red belly. There are also pale yellow spots at the back of the head. It is a small snake about one foot in length.

RING-NECK SNAKE

A thin yellowish-orange ring is just behind the head on these dark gray snakes. Small snakes, only about one to one and half feet in length, they can be found in moist woods under rocks and rotting logs.

SNAPPING TURTLES

These turtles are common in Acadia’s lakes and ponds. As their name implies these large turtles (adults up to over twenty pounds and one and a half feet in length), can give a nasty bite. They should not be handled. They prefer quiet muddy spots close to the water’s edge.

EASTERN PAINTED TURTLES

If you see a small turtle sunning itself on a log, most likely it is this common turtle. They are only five to six inches long and have patterns of black, red, and yellow along the edges of their smooth shells. Bright yellow spots mark the head.



Fact Sheet – Acadia's Fishery

The management and protection of native fish species and aquatic communities, while providing the recreational angler with a quality fishing experience, is the focus of the National Park Service's (NPS) recreational fisheries program. The NPS together with the Maine Department of Inland Fisheries and Wildlife regulate and manage freshwater fishing in Acadia National Park.

The fish communities of ponds and brooks of Mount Desert Island, particularly those within the boundaries of Acadia National Park, have been influenced by humans for well over a century. Angling pressure has increased substantially, especially in the second half of the twentieth century. This has resulted in extensive stocking of fish species native to Mount Desert Island as well as non-native and exotic (e.g. brown trout) introductions.

Virtually all ponds have been influenced by stocking at some point during the century. Of 24 ponds, only 4 have not been stocked, and these are all under 16 acres in size. The first intentionally introduced species was small mouth bass in 1891. Since that time, brook trout, rainbow trout, brown trout, Sunapee char, lake trout, landlocked salmon, alewives, rainbow smelt, largemouth bass, steelhead, sea-run Atlantic salmon, and various species of sticklebacks have all been stocked in waters within Acadia National Park. As a consequence of these community species alterations, 91% of the ponds that contain fish no longer contain their original species mix.

Historically, 31 species or subspecies of fishes have been confirmed for waters within the park, but only 14 of these are native to Mount Desert Island. The most widespread of these native fishes are banded killifish and golden shiner, each found in 79% of the ponds, as well as in several brooks. Other widely distributed fish species within park waters are brook trout (71% of ponds), pumpkinseed (67%), American eel (63%), white sucker (54%), northern red belly dace, and rainbow smelt (each 50%).

As a general trend, there is less multi-species stocking in the 1990s compared to even two decades ago. Most recent stocking has been with salmonid fishes. Numbers stocked have declined, but the size of stocked fish is larger, to promote higher survival. Only Bear Brook Pond, Duck Pond, and Lakewood have presumably never been stocked. Thus, if natural fish communities are to be studied, these three small ponds probably reflect the original fish communities.

Since almost all waters within the park are biologically altered from their original species mixture, most fish communities will never return to their original state, especially with high angler demands of salmonids from local residents and tourists. Stocking has been a tool for meeting this demand—to introduce new species of game fish or to supplement existing populations. Research could address the progression of community changes and the consequences of such species changes.

Common Fish Species Caught at Acadia:

- Brook trout
- Landlocked salmon
- Lake trout
- Brown trout
- White perch
- Small mouth bass
- Chain pickerel
- Pickerel
- Largemouth bass
- Yellow perch

SECTION THREE – FACT SHEETS

Chapter Fifteen – Plants

Plant Groups of Acadia National Park

Caring for Acadia's Native Plants

Acadia's Common Plants Field Guide





Fact Sheet – Plant Groups of Acadia National Park

There has been a long history of botanical exploration in and around Acadia National Park. In the late 1880s, students from Harvard University made their way to Acadia from Boston via train and steamship each summer in search of the unique plants found in bogs, on mountain summits, and the many habitats in between. The Champlain Society, as they called themselves, published “Flora of Mount Desert Island, Maine,” authored by Rand and Redfield, in 1894. This benchmark publication cataloged vascular plants, mosses, algae, and lichens.

Acadia has over 1100 vascular plant species that represent a wide diversity of plant life adapted to thrive in acidic, low nutrient bogs and rocky, treeless mountain summits. Grasses and wildflowers abound in park meadows, and lakes and ponds are home to emergent and floating aquatic vegetation. Almost one quarter of Acadia’s flora is non-native, and about 25 species are state-listed rare plants. It is evident that 300 years of human settlement and land use have changed the composition of plant communities throughout Acadia National Park.

FORESTS

When Samuel Champlain first wrote about the mountains of Mount Desert Island, he described their summits as barren and deserted of vegetation. He also noted that their slopes were covered with forests of pine, fir, and birch. Today, 18 major types of forests have been identified in the Acadia National Park area, going well beyond Champlain’s account in the 1600s.

Acadia National Park is blanketed with forests and woodlands that are situated in the transition zone of two eco-regions: the northern boreal forest and the eastern deciduous forest. Much of the park is covered by spruce-fir forests, representative of the boreal influence. Acadia also contains stands of oak, maple, beech, and other hardwoods more typical of most of New England. Several unique, isolated forest communities, such as pitch pine and scrub oak woodlands, are found in the park at their northeastern range limit. Similarly, jack pine reaches the southern limit of its range in Acadia. Coastal forests are dominated by white spruce and low-lying boggy areas surrounded by black spruce and larch. The diversity of Acadia’s forests are only one of the park’s special attributes, providing different habitats that support a variety of wildlife, especially birds.

A catastrophic fire in 1947 that burned a large portion of the eastern side of Mount Desert Island was the most recent major fire, but there is evidence of previous burns found in trees and soils in much of the park. The 1947 fire facilitated the

replacement of conifers with deciduous species such as birch and poplar. Therefore, there are currently large areas of 50-year-old woodlands, as well as other areas that have had a longer time to develop since being disturbed.

SHRUBS

Some of the most popular plants at Acadia National Park fall into the shrub category. Blueberries, both highbush and lowbush, cover mountain slopes and entice many visitors to snack while hiking during July and August. Other berries, like raspberries and blackberries can be found in open areas. The rugosa rose, with its perfume smell, dominates many areas along the coast.

In June, sheep laurel opens its small five-sided cup-like pink flowers, held in small umbels just below the plant's new growth for the year. Sweetfern, aptly named due to its overwhelming scent when leaves are crushed, is found along the edges of carriage roads and other open areas.

WILDFLOWERS

If you are in a wooded area of Acadia National Park, you are likely to find common, native woodland flowers, such as wild lily-of-the-valley (*Maianthemum canadense*), bunchberry (*Cornus canadensis*), goldthread (*Coptis trifolia* formerly *C. groenlandica*), bluebead lily (*Clintonia borealis*), and starflower (*Trientalis borealis*). Bunchberry is a member of the dogwood family and has dogwoodlike white flowers in spring and red "bunchberries" later in the season. Notice the arching veins on its leaves, a hallmark of the dogwood family (*Cornaceae*). Bluebead lily has a pale yellow flower in spring and later a striking blue, beaded fruit that is poisonous. Goldthread gets its common name from its golden threadlike roots. You can take a peak at the gold threads without harm to the plant by carefully pulling the soil or moss away from the roots and then pushing it back.

In August and September Acadia's native wildflowers, the asters and goldenrods, both in the aster family (*Asteraceae* formerly named *Compositae*), are in full bloom. Their European relatives, daisies and black-eyed susans, are also in this family. Each "flower" is a composite made up of many disk and ray flowers. Disk flowers are in the middle surrounded by ray flowers. Each "she loves me, she loves me not" petal is actually a complete flower (take a look with a hand lens). So what appears to be one aster or daisy flower is made up of many disk and ray flowers densely packed together. If you look very carefully at goldenrods you will see that they too are made up of tiny daisy-like "flowers."

FERNS

Visitors to Acadia National Park will undoubtedly find many ferns, an interesting group of spore-producing plants. They thrive in cool, moist, shaded areas, which are quite common on the coast of Maine! Some of the easier-to-recognize ferns are species of rock polypody (*Polypodium virginianum* and *P. appalachianum*) which appear almost identical, and are often found growing in leaf litter duff on top of large rocks. The fronds are singular and look like they are growing in a small colony or mat. If you turn one of the fronds over you may see the round sori, clusters of spore-producing structures, on the underside.

Another pair of related common ferns are cinnamon fern (*Osmunda cinnamomea*) and interrupted fern (*Osmunda claytoniana*). These two also look very much alike. Both are large ferns with non-fertile (vegetative) fronds arranged in whorls around the center. Cinnamon fern has separate, fertile, spore-producing fronds that sprout from the center of the plant in spring. These fronds are a cinnamon-like golden brown in color, which accounts for the plant's common name. Interrupted fern produces fertile leaflets in the upper third of the vegetative fronds, hence the frond is "interrupted" by the smaller fertile leaflets "within" the frond.

MOSSES

If you find a bog in Acadia National Park you are sure to see sphagnum (pronounced "sfagnum") moss. Mosses, like ferns, reproduce by spores. However, mosses don't have well-developed conductive tissue and therefore cannot move water and nutrients throughout their systems as effectively as ferns and other vascular plants. Because of this, mosses by necessity always grow in low mats in wet areas close to their nutrient source. Sphagnum species are common and come in shades of green, red, and brown. Bog hummocks, which are small mounds of sphagnum, often form to create an undulating bog surface. Each species of sphagnum finds its own niche based on levels of soil moisture. Therefore, the species of sphagnum growing on the top of the hummocks are usually different from the ones growing between the hummocks!

LICHENS

A symbiotic relationship between a fungus and algae defines what lichens are. Each part of the plant provides an important function. The fungus anchors the plant to its substrate, whether rock, tree, or ground. Secretion of an acid dissolves minerals that are then absorbed by the fungus and utilized by the algae, which manufactures the food needed for the continued growth of the lichen.

There are three groups of lichens found in Acadia. The fruticose lichens have small stalk-like appendages. One that captures the eye of many people are the British

soldiers (*Cladonia cristatella*), small green stalks with bright red caps. The multi-branching reindeer lichens (*Cladonia rangiferina* and *gracilis*) have pale grayish-green stalks and carpet both open sunny areas and forest floors. Old man's beard (*Usnea barbada*) is a stringy long lichen that hangs in the branches of spruce trees.

Foliose lichens are flat growing but have "leafy" margins. One example is the rock tripe (*Umbilicaria vellea*). Covering expanses of rock on mountain slopes, it resembles peeling paint. Its surface is olive-brown in color while the undersides are brownish-black. The yellowish Xanthoria found along the ocean's edge is another example. Crustose lichens cling to a substrate's surface, often appearing to be part of it. They are clearly evident on the island's granite, changing the rock's pinkish hue to gray, green, or black.

FRESHWATER PLANTS

Freshwater (also referred to as "aquatic") plants are probably one of the most conspicuous features of the lakes, ponds, and streams of Acadia National Park. Approximately 80 species of freshwater plants can be found in the park, with an additional dozen species that are considered semi-aquatic shoreline species. Seven of these aquatic or semi-aquatic species are either currently listed or proposed for listing on Maine's Official List of Endangered and Threatened Plants, while about 30 others are considered "locally rare."

Some freshwater plants grow completely submerged. Others are rooted in the bottom, but their leaves or flowers may be on or above the water's surface. These are respectively known as "floating" and "emergent" vegetation. All freshwater plants are important members of the aquatic community, providing shelter and nesting sites to a variety of fishes and other animals, and serving as an important food source for mammals, waterfowl, and turtles.

About a quarter of the plants that one encounters at Acadia National Park appear "grasslike." The amateur would probably call all of these grasses, but in fact some are sedges and some are rushes. Here is a little rhyme to help tell the three apart: "sedges have edges, rushes are round, and grasses have joints." Sedges usually have a triangular stem, rushes have round stems, and grasses have a jointed stem. Sedges, grasses, and rushes often inhabit wet areas. All of them have flowers; they just aren't showy. Take a closer look and you will be amazed at the diversity of these wind-pollinated wildflowers!

For a common plant checklist, see appendix C.



Fact Sheet – Caring for Acadia’s Native Plants

EXOTIC PLANTS

Exotic plants are non-native species introduced by humans into an area where they did not previously exist. Some may have escaped from gardens. Others have traveled via ship ballast, car and truck tires, and boats. Exotics can also be spread in road salt and sand, as well as in fill. It is the aspect of human influence that distinguishes exotics from native plants that occur naturally in an area.

The presence of exotics in national parks is not uncommon. In fact, nearly one quarter of the 1,101 plant species found in Acadia are exotics. National parks were set aside to protect and preserve natural, cultural, and scenic resources. Since exotics may threaten these resources, staff at many parks, including Acadia, work to control them.

Some exotic plants, like purple loosestrife (*Lythrum salicaria*), are extremely invasive. A showy, non-native perennial introduced from Europe, purple loosestrife has striking pink/purple or magenta colored flower spikes that bloom from mid-July through the end of August. Despite its attractive appearance, it threatens the existence of native plants and wildlife in wetlands by choking out native vegetation such as cattails (*Typha latifolia*). Without its native European biological controls of insects and diseases, purple loosestrife can devastate wetlands.

Many species of mammals, fish, insects, and waterfowl, including mallards, muskrats, and red-winged blackbirds, depend on a variety of aquatic plants that purple loosestrife pushes out. In some parts of the northeast, purple loosestrife has completely taken over wetlands, creating a monoculture by choking out native plants. In the summer, Maine Interstate 95 displays spikes of purple in drainage areas—evidence of purple loosestrife on the move. Here in Acadia, management is keeping it under control in the park’s wetlands, but outside of the park, its population is growing in wetlands.

Management of exotic species in Acadia includes determining whether a particular exotic poses a serious threat to native resources and whether control is feasible, identifying and monitoring areas where non-native plants grow, and deciding what treatments will be effective. Purple loosestrife, for example, is managed by carefully spraying an herbicide on individual plants, and educating park neighbors and local nurseries about this invasive ornamental. The use of an herbicide in a national park requires adherence to strict guidelines. First, it must be determined that the use of the herbicide is the only reasonable option and that the problem, ignored, could worsen. Second, the chosen herbicide must have undergone rigorous testing and be considered safe for use by the Environmental Protection Agency. Approval for use

must be obtained from the Department of Agriculture, National Park Service, and the Maine Board of Pesticide Control. The least toxic and quickest biodegrading herbicide was selected.

There are currently 12 non-native plant species in Acadia National Park that are of high management concern. Garlic mustard is an early spring flower that can replace native spring ephemeral wildflowers and dominate the understory of deciduous forests and woodlands. Japanese barberry has the ability to reside in a wide range of habitats including forest understories, wetlands, and fields, and it too can out-compete native plants. Other invasive plants in Acadia include oriental bittersweet (*Celastrus orbiculatus*), and buckthorn (*Frangulus alnus* and *Rhamnus catharticus*). Not all exotics are necessarily harmful. Some, such as domestic apple trees (*Pyrus malus*) and lilacs (*Syringa sp.*) grow in former home sites and are not invasive, nor do they directly threaten other plants or wildlife.

HOME SWEET HOME – NATIVE PLANTS

Problems created by plants like purple loosestrife provide a clear example of the implications of non-native plants in national parks. Charged with preserving natural ecosystems, National Park Service policies direct parks to use native rather than non-native plants for landscaping and revegetation within their boundaries.

Using native plants preserves the genetic integrity of native plant communities and assures compatibility with plants already growing there, increasing the chances for plant survival. Native plants have adapted over centuries to the area's climate and soils and need virtually little care. The base of the food chain for the area is formed by native plants that provide food wildlife depends on.

Salvaging plants that would otherwise have been destroyed during the carriage road rehabilitation project is one example of how Acadia uses native vegetation. These plants are used to restore sites damaged from trampling and erosion, reduce or prevent visitor impacts, screen development from view, or stabilize soil during and after construction. Relocating these plants within the park guarantees that genetically native materials are planted versus those purchased in a nursery. Although nurseries may carry native species, the plants they sell are probably not the same genetic stock growing naturally in Acadia National Park.

Acadia National Park's vigilant monitoring and control of purple loosestrife protects wetlands for native plant species and wildlife while the establishment of a native revegetation program is a vital part of the protection of all park habitats. Both of these projects are an important component in maintaining the park ecosystem intact well into the future.

PLANTS UNDERFOOT

Although most of the plants on Acadia's mountain summits had been identified, little was understood about their associations within plant communities. This deficit of information limited the understanding of the ecology of these subalpine plants. Some of these plant species are considered rare and unusual to Maine coastal environments, usually at home in the more northerly latitudes or on mountain peaks like Mount Washington in New Hampshire.

Because of the increase in visitation on Acadia's summits in the last few decades, investigations on the ecology and recreational effects on these plant communities was necessary. Discoveries note that indeed, constant trampling underfoot changes the composition of these communities. Subalpine species affected include alpine clubmoss, mountain sandwort, deer grass, and mountain cranberry. Areas on summits may be roped off in an attempt to keep visitor impact in specific sites rather than spread across the summits.

HOW YOU CAN HELP

Take a stand against the invaders! Avoid purchasing from nurseries plants that are known to be invasive, such as purple loosestrife, Japanese barberry, oriental bittersweet, or buckthorn.

Watch your step! While exploring natural areas, stay on designated trails to avoid crushing tiny plants underfoot and disturbing fragile habitats. Remember, plants grow by the inch and die by the foot.

It all starts at home! Check your own home or garden. Are the plants native to your area? If not, do their seeds spread to other areas? Consider removing plants you know to be invasive.

Garden with natives! Contact local nurseries that sell native plants. Your local extension service, nature centers and gardening clubs can also assist you with your gardening needs. Please remember, plant species native to Acadia may not be suited to other regions. Use plants native to your area and growing conditions.

Leave it be! In Acadia National Park, collecting plants, or any other natural or historic objects, degrades the park and threatens species survival. Collecting is prohibited!

Visit www.fws.gov (US Fish and Wildlife Service) for a national plant list of threatened and endangered plant species, and learn the identity of threatened plants in your area.



Fact Sheet – Acadia's Common Plants

This abbreviated field guide provides basic information on some of Acadia National Park's most common plants. For more information, refer to field guides or visit the Wild Gardens at Sieur de Monts Spring. A plant checklist is found in Appendix C.

DECIDUOUS TREES

Paper Birch (*Betula papyrifera*)

Description

- Clear, white peeling bark with narrow horizontal stripes
- Oval, toothed leaves (vs. gray birch with triangular pointed leaves)

General Information

- Good wildlife browse—beaver, deer and moose eat leaves and twigs; grouse eat buds
- Durable bark used for canoe, wigwam coverings, containers by American Indians
- Often repopulates disturbed areas (fire; cutting). Seeds survive one to two years and are carried by wind

Where Found

- Found in open areas and large expanses in areas burned in 1947. One of the most beautiful birch forests at Acadia is along the northern side of Great Head.

Bigtooth Aspen (*Populus grandidentata*)

Description

- Smooth, greenish-gray bark
- Large roundish toothed leaves that shake in even slight breeze; petiole (leaf stalk) flat, not round
- White fluffy seeds from catkins look like snow in late May, June
- Bright yellow autumn color

General Information

- Rapid growing, short-lived tree
- Favorite beaver food

Where Found

- Areas associated with the 1947 fire or other disturbances; often found growing with paper birch

Quaking Aspen (*Populus tremuloides*)

Description

- Smooth, greenish-gray bark; smaller tree than bigtooth aspen
- Small, roundish leaves with 20-40 pairs of fine teeth; far less noticeable than the bigtooth aspens deeply toothed leaves; flat petiole (leaf stalk)

General Information

- Good wildlife browse for beavers, grouse, deer, snowshoe hare
- Seeds windborne and can repopulate disturbed areas quickly; can also repopulate by root cloning, sending up new shoots from root stock

Where Found

- Areas associated with the 1947 fire or other disturbances

Sugar Maple (*Acer saccharum*)

Description

- Beautiful, spreading branched tree
- Indented leaves have five lobes with u-shaped indentations (think “sugar-bowl” shaped)
- Opposite branched

General Information

- Excellent tree for maple syrup—40 gallons of sap boils down to 1 gallon of syrup

Where Found

- Indicator tree for undisturbed area and fertile soil; along open meadow edges

Red Maple (*Acer rubrum*)

Description

- Thinner tree than sugar maple; narrower branching pattern
- Indented leaves have five lobes with v-shaped indentations; silvery-white underneath

General Information

- Easily colonizes after fire by suckering

Where Found

- Often found in disturbed areas and Acadia’s wet marshes

Red Oak (*Quercus rubrum*)Description

- Tall, stately tree growing on dry soils
- Furrowed bark with reddish coloration in furrows from lichens associated with red oaks
- Pointed leaves with 7-11 lobes

General Information

- Acorns important wildlife food

Where Found

- Grows along dry hillsides
- One of two oaks in Acadia; other oak—bear oak (only found on Acadia and St. Sauveur Mountains)

American Beech (*Fagus grandifolia*)Description

- Smooth, gray bark—found around Bubble Pond, Bubble Rock, Wildwood Stables area
- Oval, toothed leaves

General Information

- Beech nuts are favorite wildlife food
- Indicates fertile soil conditions; beech root sucker, often creating monocultures

Where Found

- Around undisturbed areas in valleys; South Bubble and Wildwood Stables are two such areas

Shadbush (*Amelanchier sp.*)Description

- Can be shrub-like or tree; grows in part shade in understory or on woodland edges
- Alternate leaves are finely toothed; flowers in spring are white with five petals (rose-like; member of the rose family); make a beautiful spring display

General Information

- Named for its flowering display that occurs when the shad (fish) run; also called serviceberry

Where Found

- Common in disturbed and wet areas

Fire Cherry (*Prunus pensylvanica*)

Description

- Small tree or shrub, 10 to 20 feet tall
- Smooth, reddish brown bark with small white “dots”—lenticels
- Three to five inch long leaves with serrated margins
- Creamy white flowers borne in long clusters.

General Information

- Pale-red cherries food for wildlife

Where Found

- Thickets and young, sunny woods
- Found in burned over areas

CONIFEROUS TREES

Red Spruce (*Picea rubens*)

Description

- 1/2" long yellowish-green needles. Small reddish hairs on needle branches
- 1" to 1-1/2" long cones are reddish-brown when new

General Information

- Shade tolerant; can remain stunted for years until sun is available
- Most common tree at Acadia; reaches its southern edge in Maine

Where Found

- West side of Acadia
- Older spruce forests between Otter Point and Jordan Pond

Balsam Fir (*Abies balsamea*)

Description

- Flat needles grow along one plane; 1/2" to 1-1/2" long needles; shiny dark green above; Silvery underneath
- Cylindrical 2" to 4" long cones; dark purple when young

General Information

- Common and traditional Christmas tree—wonderful scent

Where Found

- Associated with red spruce forests in Acadia; however, not as common and often only grows as an understory tree

White Spruce (*Picea glauca*)

Description

- 1/3" to 3/4" blue-green sharp, pointed needles
- From a distance, has a whitish hue from fine hairs on the leaves and twigs

General Information

- Sometimes called skunk spruce—do not use this for a Christmas tree!

Where Found

- Grows right along the shoreline where climate is cooler due to ocean influence

Black Spruce (*Picea mariana*)

Description

- Very short 1/4" to 1/2" sharply pointed needles
- Cones are grayish brown

General Information

- A predominantly northern tree, found all the way to the edge of the arctic tundra

Where Found

- Grows around edges of bogs and is often associated with tamarack
- Found in boggy areas around Seawall

Eastern Hemlock (*Tsuga Canadensis*)

Description

- 1/3" to 2/3" long flat needles; lie mostly along one plane
- Cones are much smaller than spruce and grow on the ends of the twigs

General Information

- Soil cores indicate that hemlock dominated in ancient forests after the last glacial period

Where Found

- Shade and moisture loving tree growing in dark hollows
- Found around Cobblestone Carriage Road Bridge, Hemlock Carriage Road Bridge, and the Hemlock Road at Sieur de Monts Spring

Northern White Cedar (*Thuja occidentalis*)

Description

- Leaves made up of small, overlapping yellowish-green scales that cover the surface of flattened branches
- Cones 1/3" to 1/2" long, erect clusters near twigs end
- Stringy bark

General Information

- Favorite browse of deer

Where Found

- Found in cool, swampy places; alongside lakeshores and streams

Tamarack (*Larix laricina*)

Description

- Feathery, bright green needles
- The 1/2" to 1" needles grow in a bundle, stemming from a short stub-like projection on the twig
- Reddish-brown cones are less than 1"

General Information

- Deciduous evergreen, the tamarack loses its needles in the fall

Where Found

- Grows in boggy, wet areas around Seawall area. Associated with black spruce

White Pine (*Pinus strobus*)

Description

- Five, long needles (3" to 5") in a bundle
- Cones are 6" to 8" long
- Grow 75 to 100 feet tall

General Information

- Used for ship's masts at one time—British king had white pines marked to be used for the British fleet

Where Found

- Dry soils and mountain ridges

Red Pine (*Pinus resinosa*)

Description

- Needles are 5" to 6" long in bundles of two
- Has reddish, plated bark
- Cones are smaller and wider than white pine; 2" to 3" tall

General Information

- Sometimes mistakenly called Norway pine

Where Found

- Dry ridges like Acadia Mountain and the upper north end of Eagle Lake

Pitch Pine (*Pinus rigida*)

Description

- Rich, green needles of 1" to 3" in clumps of 3
- 1-1/2" to 3-1/2" long cones with recurved prickles on the cone bracts
- Bark is purplish red with ridges and furrows

General Information

- In many areas of the country, pitch pine cones only open to release seeds when fire is present; at its northern edge here, that does not seem to hold true

Where Found

- Grows in rocky, dry areas; especially prominent at Great Head, Gorham Mountain, and Wonderland

SHRUBS

Smooth Alder (*Alnus serrulata*)

- Shrub that forms thickets in watery areas
- Leaves are 1" long and leathery with fine teeth
- Male and female reproductive flowers—male: catkins; female: small cones
- Along water edges like Jordan Pond and Eagle Lake

Lowbush Blueberry (*Vaccinium angustifolium*)

- Low shrub; 1-2 feet tall
- Small, oval leaves
- White bell-like flowers become blueberries in late July and August
- On rocky mountain slopes and exposed areas like the front of Jordan Pond lawn and at the summit of Cadillac

Black Huckleberry (*Gaylussacia baccata*)

- Looks similar to blueberry
- Look for yellow resin "dots" under leaves
- Black berries are tart and seedy
- Often found in the same areas as blueberry

Sheep Laurel (*Kalmia angustifolia*)

- Rhododendron up to 3 feet high
- Leathery, narrow leaves 1" to 2" long
- Pink five-sided cup like flowers in clumps below this year's new growth
- Along meadow edges and rocky exposed areas along mountain trails
- Bloom mid-June to mid-July

Rhodora (*Rhododendron canadense*)

- Wild azalea 2-3 feet tall in wet areas
- Blooms in May-June before leaves appear
- Small, narrow purplish flowers
- Areas of Great Meadow turn pinkish with the flowers of this azalea

Rugosa Rose (*Rosa rugosa*)

- Dense stands of bright green crinkly leaves with pink or white-scented flowers
- Thick-spined stems
- Found along ocean side
- Rosehips in August
- Along the ocean—huge drifts of rugosa rose grow at the end of the Wonderland trail

Bayberry (*Myrica pensylvanica*)

- Thick, waxy leaves
- Pale blue waxy berries grow directly on twigs
- Grows along shoreline along the Ocean Trail and at Wonderland

Sweet Fern (*Comptonia peregrine*)

- Small fern-like 3" to 6" leaves on woody stems
- Grows 12" to 18" high in open dry sunny places
- Leaves have wonderful scent when crushed
- Found along many carriage road edges

WILDFLOWERS – OPEN AREAS

Fireweed (*Epilobium angustifolium*)

- 3-7 feet tall, grows in clumps
- Pink flowers on spikes, blooming in July and August

Hawkweed (*Hieracium pretense* or *aurantiacum*)

- Flowers can be orange or yellow
- Composite flower with numerous tiny flowers in one head
- 1-2 feet heavy stem blooming in fields and roadsides; June-September

Wild Lupine (*Lupinus perennis*)

- Clump forming with purple, pink, or white pea-like flowers in spikes 1-2 feet tall
- Palmate leaves on hollow stems
- Blooms in June and July

Meadowsweet (*Spirea latifolia*)

- 2-5 feet tall shrubby plants
- Fuzzy creamy white to pale pink flowers—blooms late June to September
- Sunny, moist meadows

Steeplebush (*Spirea tomentosa*)

- Similar in appearance to Meadowsweet, but with deep pink flowers
- Blooms in late July and August

Flat-topped Aster (*Aster umbellatus*)

- 2-7 feet tall plant
- 1/2" inch to 1" flat top white flowers with yellow centers, bloom August through September
- Dry, sunny areas

Big-Leaved Aster (*Aster macrophyllus*)

- 2-3 feet tall plant
- Light purple, inch long flowers with yellow centers bloom August through September
- Roadsides, clearings, and open woods

WILDFLOWERS – WOODED AREAS

Bunchberry (*Cornus canadensis*)

- Relative of dogwoods
- Groundcover in moist woods with dappled sunlight
- Flowers include four white bracts surrounding inconspicuous “flowers” which become red berries in late summer
- Leaves in a whorl of six

Canada Mayflower (*Maianthemum canadense*)

- Cool woods with dappled sun
- 3" to 6" high with 2 or 3 narrow oval leaves
- Creamy flowers with four petals clustered on a stalk bloom in May and June

Starflower (*Trientalis borealis*)

- Coniferous forests preferred
- 4" to 6" high with narrow, strap-like leaves in whorls of 5-9
- Blooms with 1 or 2 6-7 pointed star-like white flowers

WILDFLOWERS – MOUNTAIN SUMMITS OR ROCKY EXPOSED AREAS

Wine-leaved, or Three-toothed Cinquefoil (*Potentilla tridentate*)

- Low, growing plant with three narrow leaflets, 1/2" to 2" long
- 5-petal white flowers
- Grows in cracks and crevices in gravelly soil

Harebell (*Campanula rotundifolia*)

- Often nestled in cracks of rocks along the shore or in higher elevations
- Basal leaves with stalk of blue-bell like flowers; 6" to 18" tall
- Blooms July-September

WILDFLOWERS – OCEAN-SIDE FLOWERS

Beach Pea (*Lathyrus japonicus*)

- 1" to 2" compound leaves are divided into 6 or 12 leaflets
- Purplish, pink pea flowers bloom from late May to August
- Small pea pods left behind after flowering
- Grows right in sandy and rocky areas

Sea Lavender (*Limonium nashii*)

- Tiny, 5-petal pale purple flowers bunch together to form sprays
- Plant is one to two feet tall
- Grows in upper levels of salt marshes; salt tolerant

SECTION THREE – FACT SHEETS

Chapter Sixteen – Land Formations

Geographic Features

Geology





Fact Sheet – Geographic Features

Variety is the key word when referring to the natural features of Acadia National Park. While many parks have been established to highlight and protect a very specific natural feature, visitors to Acadia experience a wide diversity of ecosystems and biological communities. With elevation in the park ranging from 1,530 feet to sea level, animals and plants inhabit zones from sub-alpine to intertidal. Ocean, mountains, lakes, streams, wetlands, forests, meadows, and beaches are all found within the roughly 48,000 acres of Acadia, and each feature makes a unique contribution to the natural tapestry.

SHORELINES AND COAST

The resilient land of Acadia National Park continued to rise relative to the sea until about 10,000 years ago, when it finally stabilized. Since that time, the level of the sea worldwide has risen to its present height, and continues to rise at a rate of about two inches per century. The rising sea and depressed land mass created a “drowned coast.”

This means that what appears today as arms and fingers of the sea were once river valleys; islands were the tops of mountains; headlands and peninsulas were rocky ridges. The bedrock gave substance and the glaciers gave character, but without the sea, Acadia would be like a gem without a setting. Each headland, bay, and inlet reveals the majestic interface between sea and land. Acadia’s rocky headlands bear the brunt of enormous energies unleashed in waves that batter cliffs and erupt in lofty spray.

INTERTIDAL ZONE

With over forty miles of rocky shoreline, Acadia National Park possesses a tremendously rich intertidal flora and fauna. Twice daily, the nutrient-rich marine waters cover these plants and animals. However, during the lower stages of the 8- to 12-foot tidal range, the ocean leaves behind pools of water inhabited by sea stars, dog whelks, blue mussels, sea cucumbers, rockweed, and other creatures and plants.

The coastal ocean waters surrounding Acadia are home to countless other animals, from clams and sea urchins to the commercially-prized lobster. Gulls and other seabirds wheel overhead, and marine mammals such as seals, whales, and porpoises often frequent the area. In the Gulf of Maine, species ranging from tiny phytoplankton to large fish make up the diverse yet precarious food web.

BEACHES

The sea constantly reinvents the coastline of Acadia National Park. Waves and currents take material from one point on the coast, only to deposit it somewhere else. Cobble beaches are created in this manner, as rocks are dislodged and smoothed by the force of the ocean then placed on another section of shoreline.

Because Acadia's coast is young, sandy shores are rare. However at Sand Beach, the park's largest feature of this type, shore currents have shifted the tons of sand that the sea eroded from the rocks. Mixed into the sand are broken bits of shells and the skeletons of crabs, mussels, sea urchins, and other marine life.

MOUNTAINS

At some times of the year the sun touches the slopes of Cadillac Mountain before any other place in the United States. At 1,530 feet, Cadillac is the highest point along the North Atlantic seaboard of the United States. It is one of 17 mountains that rise from the sea and comprise much of the island on which a portion of Acadia National Park is located.

The mountains were built up by tectonic and volcanic forces, and scraped down and shaped by a succession of glaciers. The land sank beneath the weight of mile-deep ice as glaciers inexorably ground their way toward present day Georges Bank, Long Island, and Cape Cod. As the glaciers receded, they filled a vast valley surrounding the mountains with meltwater, creating the Gulf of Maine. Relieved of the great burden of the ice, the land slowly rebounded. These processes, over the eons of time, created the landscape of which Acadia National Park and its mountains are a part.

Life is not easy at the top, but the mountains are not as barren as Champlain described. They are home to forests of spruce and pitch pine. Tiny subalpine plants, such as cinquefoil, blossom in joints in the granite and on the leeward side of rocks. Squat, gnarled trees may survive winter after harsh winter. And, during the spring and summer, peregrine falcons have called some sheer mountain cliffs home.

WETLANDS

Over 20% of Acadia National Park is classified as wetland. All classes of wetlands (marine aquatic beds, intertidal shellfish flat, salt marshes, freshwater marshes, forested wetlands, and peatlands) are found within the park. They form the transition between terrestrial and aquatic environments, and contribute significantly to the health, productivity, and uniqueness of the region.

Wetlands are especially important because they maintain biodiversity by providing a habitat for a wide range of species. Native wildlife frequent wetlands alongside species that are nesting, overwintering, or migrating, such as birds along the Atlantic flyway. More than half of Maine's state-listed rare plants are found in wetland habitats, and at least one rare plant is found in each Acadia wetland type.

The freshwater wetlands of Acadia National Park and Mount Desert Island are living communities that are still in the process of formation. In a hundred years, many of them will look different than they do today. The Tarn and Aunt Betty's Pond, for instance, are filling in and emergent wetland plants such as arrowhead, bayonet grass, and pickerelweed make the two ponds look like green meadows in late summer.

Forested wetlands are one type of freshwater wetland. In Acadia, the dominant species include northern white cedar, red spruce, and black spruce, together with subordinate species such as larch, red maple, quaking aspen, and white birch. Shrubs include serviceberry, winterberry, speckled alder, green alder, highbush blueberry, wild raisin, meadowsweet, mountain holly, sheep laurel, blueberry, sweetgale, black huckleberry, Labrador tea, and leatherleaf. Ground cover species include skunk cabbage, bunchberry, Canada mayflower, starflower, twinflower, goldthread, swamp dewberry, creeping snowberry, large-leaved cranberry, three-seeded sedge, cinnamon fern, and sphagnum moss.

LAKES, PONDS, AND STREAMS

A canoe paddle ripples through the water while a loon's call is heard in the distance; screams of summer excitement at Echo Lake; a seasonal waterfall rushing over a granite cliff after a summer storm. All these scenes possess a similar theme—water. Whether along a quiet stream or an inland lake or pond, water is a central feature to an Acadia National Park experience.

Twenty-six lakes and ponds dot the Acadia landscape ranging in size from a few acres to almost 900 acres. Some are located entirely within Acadia National Park's boundaries while others are shared with private landowners and local communities. Numerous streams, both seasonal and permanent, run through the park, feeding many of the lakes, ponds, and marshes.

See also mountains and lakes information in appendix D.



Fact Sheet – Geology

The landscape that we know as Acadia had its beginnings more than 500 million years ago, when mud, sand, and volcanic ash were deposited in an early ocean. With time, forces deep within the earth buried, heated, and squeezed sediments into Ellsworth Schist, a metamorphic rock characterized by contorted, thin bands of white and gray quartz and feldspar, and green chlorite. It is the oldest rock known in the Mount Desert region.

The combined forces of erosion and the shifting of the rigid plates that make up the earth's crust (tectonics), brought the deeply buried Ellsworth Schist to the earth's surface. Approximately 450 million years ago, it formed the floor of an ocean which accumulated sand and mud. Burial hardened these fine-grained deposits creating the Bar Harbor Formation, a sequence of brown to gray bedded, or layered, sandstone and shale. Following, or simultaneously with, the creation of the Bar Harbor Formation, volcanoes erupted in the region. Volcanic flows and ash accumulated in the ocean basin, and formed the light-colored Cranberry Island volcanics.

A complex series of events followed, leading to the intrusion of several different types of molten, or igneous, rocks. The intrusive rocks cooled deep within the earth, allowing the crystals of various minerals to form and grow. Each rock type is composed of a unique set of minerals. The first and oldest is a gabbro. This rock is dark in color, and is made up of iron-rich minerals.

The granites of Mount Desert Island are approximately 420 million years old. Because their mineralogy is so similar, the granites are identified by the size of individual mineral grains and the composition of the scattered dark minerals present. One of the oldest granites to appear was the Cadillac Mountain Granite, the largest granite body on the island. It oozed up through existing rocks, stressing and fracturing the overlying bedrock and causing large chunks to fall into the molten magma body. Some chunks of bedrock melted in the intense heat, while others were suspended in the magma. When the granite cooled deep in the earth, these blocks remained, surrounded by crystallized granite. This region of granite and broken rock, called the shatter zone, is still visible on the eastern side of the Cadillac Mountain Granite.

A medium-grained granite formed to the west of the Cadillac Mountain Granite. Later volcanic activity injected basalt, a fine-grained, black, igneous rock into the granites and surrounding rocks. These basalt bodies, or dikes, can be seen along the Cadillac Mountain summit road and on Schoodic Peninsula.

Little record of the following several hundred million years remains. Erosion wore away the rocks covering the large granite bodies, bringing them to the earth's surface. The same process removed much of the softer rock surrounding the granite, leaving behind resistant granitic mountains ringed by lowlands. Streams ran between the ridges, and a succession of plant and animal life inhabited the region.

ODYSSEY OF ICE

Evidence from many parts of the world suggests that a succession of ice sheets flowed across northern North America during the last two to three million years. Each glaciation removed traces of previous ice sheets, leaving a record of only the last ice sheet to move through the region.

The glaciers eroded the mountains and cut broad U-shaped valleys. Materials carried at the base of the ice polished the mountains, and left long scratches (striations) and crescent-shaped gouges (chatter marks) in many places. This episode, called the Wisconsin Glaciation, reached its maximum extent 18,000 years ago with its terminus far to the south of Maine. As the climate warmed, more ice melted in the warmer months than accumulated in the winter. Although ice continually flowed south from more northern portions of the ice sheet, the front of the glacier began to recede, exposing deposits of material carried by glaciers. Accumulations of rock, gravel, and sand dammed valleys. Boulders carried 20 miles or more were left behind by the melting ice. These glacial erratics are found in valleys and on mountain tops. A carpet of glacial debris was spread out upon the landscape. The vast weight of the ice depressed the land surface, so that in Maine's coastal region the melting of ice was accompanied by an invasion of the sea. Marine waters covered the lowlands and created islands of Acadia's mountains. Beaches and sea caves formed at almost 300 feet above the present day sea level. Fine-grained material settled out of the sea, and draped low areas with a layer of marine mud. With the continued recession of the ice, the land surface rose and stabilized. Lakes, such as Jordan Pond, formed in valleys dammed by ridges of glacial debris. Plants and animals colonized the uncovered land. Rivers and streams carved new drainage paths, and by 5,000 years ago, the region became the home of people.

TODAY

The varied landscape of Acadia is the result of continuing geologic processes. A striking geologic activity is the weathering of granite ridges. Large joints, or fractures, in the rock form square blocks. The joints enlarge and expand when water fills them and freezes. Eventually the rock breaks away from the cliff leaving behind granitic rubble and bright pink scars on precipitous rock faces.

Along the coast, the sweep of tides and waves continually shape the shoreline. Rocky headlands bear the full brunt of the wind and waves of the open ocean. Salt marshes, rich with life, grow in protected tidal valleys, while beaches occupy sheltered coves.

Many different types of beaches are found on Acadia's shores. The size of material composing the beach depends on the energy of the waves which create it. Coves protected from strong wave action are made up of fine-grained material, such as Sand Beach. Beaches facing the open ocean and only minimally sheltered by rocky headlands consist of pebbles, cobbles, and even boulders. The stronger the wave action, the larger the material the waves can carry. In the case of a beach open to the storm driven waves of the Atlantic, only the largest boulders remain.

The source of the beach material varies. In some places, glacial debris is washed in by the waves, and finer material is removed leaving cobbles and pebbles to be rolled and rounded by the surf. Sea cliffs can provide beach material, such as large rounded boulders. Sand Beach is composed primarily of bits and pieces of the shells and hard parts of marine life, such as mussels and sea urchins.

Acadia's landscape is the product of great expanses of time. Massive geologic forces—mountain building, molten magmas, and huge ice sheets—formed the landscape, while the persistent forces of erosion—water, wind, and waves—ever so slowly continue to shape what we see today, leaving a record of Acadia's geologic past written in the rocks.

See also related geology information in appendix D.

SECTION THREE – FACT SHEETS

Chapter Seventeen – Intertidal Zone

Life Between the Tides

Suggestion for a Low Impact Visit to the Shore

Intertidal Plants and Animals





Fact Sheet – Life Between the Tides

The complex habitat between low and high tide supports a diversity of plants and animals that must adjust to a wide range of living conditions. No other place on earth experiences such drastic physical changes daily like this narrow strip caught between the ocean and land. Whether a tidepool or a mudflat, the plants and animals here are well adapted for harsh conditions.

TIDEPOOLS

Natural basins and crevices which retain pools of seawater as the tide recedes are called tidepools. These crevices in the rocky surfaces provide places for an abundance of animals to hide and protect themselves. Some will spend their entire lives in a tidepool, while some are temporary visitors—coming and going with the tides. Others stay only part of their life cycle.

By definition, to be a tidepool, there must be a tidal change. The tide along Acadia's coast ranges from eight to 14 feet. Yet, places like Sand Beach and Otter Cliffs are not known for their tidepools. Why not? There is no place for the tide to leave pools on a flat beach or a sheer cliff. In other places along Acadia's coast, rocks descend more gradually to the sea, leaving places for water to pool as the tide drops. These tidepools are found in the intertidal zone, the area covered with water at high tide but exposed at low tide.

Even within the intertidal zone, tidepools vary. This special area further divides into smaller bands or zones which support various forms of plant and animal life. The pools higher on the shore will undergo the greatest changes in temperature, salinity, and water level. Some plants and animals that thrive in one zone may not survive as well in another. The best time to visit the intertidal zone is during low tide, when more of the area is exposed. *Please be sure to read tips for a low impact visit on page 3-76.*

Splash Zone

The highest zone along the coast is the splash zone or the black zone. The names offer clues about the place. Found above the usual high tide line where the waves may splash the exposed rock, it appears black. Its color comes from an organism called a blue-green algae (which is actually black and a cyanobacteria!). This zone is very slippery when wet. Not much else lives in this zone besides rough periwinkles. These creatures are so small that you might not notice them at first. But once you begin to see them in the cracks and crevices, their numbers might surprise you.

The Barnacle Zone

Continuing toward the water, you will next enter the barnacle zone. Here the whitish conical shells of these marine creatures cover the rocks. Many boat or dock owners consider barnacles a nuisance to be scraped off.

However, closer study reveals that these are fascinating animals. Barnacles begin their lives in a significantly different form. They are tiny members of the zooplankton (animal plankton) which is washed about by waves and tide. Eventually, they must find a spot to settle for the rest of their lives. Living near other barnacles seems particularly beneficial.

From our human point of view, living in the intertidal zone might seem rather inconvenient. But for the barnacles, this location provides some advantages. During high tide, they can open their shells to feed or reproduce. During low tide, the exposed creatures must close their shells to avoid drying out. While the water removes food and needed moisture, it also removes many marine predators. This zone also supports both dog whelks, which feed on barnacles, and common periwinkles, which feed on algae.

Rockweed Zone

While animals characterize the barnacle zone, the rockweed zone is characterized by plants. The most obvious group, the rockweeds, includes knotted wrack and bladder wrack. These seaweeds attach to the rocks and drape over them at low tide. As the tide rises, little bumps or air bladders help the plant float toward the surface of the water. This allows more sunlight to reach the plant for photosynthesis. Moving the rockweed aside, you can expose the animals staying hidden and moist under it. (Be sure to replace the plants when you finish looking. The animals need their protection.) Two introduced species, green crabs and common periwinkles, thrive here. Dog whelks, smooth periwinkles, and limpets move over the rocks. (Don't try to pick up the limpets. They need to stay in their chosen places). Likewise, blue mussels should remain where they have anchored themselves to a rock. Their byssal threads are very strong and are being researched for possible insights into dental adhesives.

Irish Moss Zone

The Irish Moss Zone commonly merges with the zones above and below it. The characteristic plant in this area grows in small but thick patches and has amazing iridescent tips. If the plant is removed from the water, it loses this coloration. Irish moss is harvested and used as a thickener in ice creams, chocolate milk, and other products. (look for carrageenan in ingredients). Dulse and sea lettuce also grow here.

Dulse is another red algae. It is sometimes dried and sold in strips as a chewy snack, or shredded and used as a seasoning. Sea anemones and nudibranchs, or sea slugs, might be found tucked into the rocky crevices. Anemones attach themselves to the rocks and use their sticky tentacles to sting small prey that swims or drifts by. Nudibranchs can eat anemones. Some of them can transfer the anemones stinging cells to projections on their own backs to serve as protection from predators.

Kelp Zone

The next and final zone is the kelp zone. Here, as you might imagine, the kelps grow. These brown seaweeds almost always remain under water. They have three main body parts: the holdfast attaches the plant to the rock, the stipe resembles a stem, and the blade looks like a leaf. Within the kelps, there is wonderful variation. Imagine what the horsetail kelp and sea colander look like. Many of the tidepoolers' favorite creatures such as the sea star, sea urchin, and sea cucumber reside in this zone. All these animals are echinoderms, meaning they have spiny skin and radial symmetry (usually with five sections). Rock or Jonah crabs live here where lobsters might rarely be found. As you can see, within the tidepools, an amazing amount of life exists in very concentrated areas. The zone divisions allow different organisms to find their appropriate niche. For example, competition between plants is minimized because the different color algae photosynthesize with different wavelengths of light. Green algae grow in upper zones while red and brown algae grow in progressively lower zones and use the light that reaches their depths.

MARSHES, MUDFLATS, AND OTHER MUCK

Rocky shores are the most obvious coastal feature, but in quiet coves one can find mudflats. Mud collects in estuaries, marshes, mudflats, and other places with still or slow moving water such as Ship Harbor mudflat. Rivers and streams wash down the particles of mud. Waves and currents then move them about. But as the water loses energy, it drops its larger loads until, eventually, even the mud settles out. The mud that settles in the intertidal zone is covered at high tide and exposed at low tide. Gulls, herons, and other birds can be found at low tide feeding in the mud, extracting clams and marine worms.

Mud is a suitable habitat for these invertebrates offering them protection. They are less likely to be found by various predators, and less likely to be dried by the sun or wind when the tide recedes. Furthermore, the mudflat's environment, not suitable for other species, limits competition faced by its inhabitants.

But living in the mud does have some disadvantages. For one thing, there is not much oxygen in mud. This condition suits the anaerobic bacteria that live there. As

the name implies, this bacteria does not need oxygen. But other mud dwelling animals need more than is readily available. What to do? Anyone who has been clam digging knows that some creatures in the mud have their own siphons or tunnels to the surface. Through this opening, the critters below can access oxygen and water. The water can bring food and wash away waste.

TIDES

Both tidepools and mudflats are greatly influenced by the action of the tides. Around Acadia National Park, the tide has a general fluctuation of eight to 12 feet twice daily (reaching 14 feet at certain times). A 12 foot change might not seem particularly significant in the middle of the Gulf, but along the shoreline it's quite important. Imagine your home filling with 12 feet of water twice a day, or a 12 foot deep pond draining twice a day. The plants and animals that live along the Gulf's edge face such dramatic changes. But what causes these tides?

The answer is complicated and includes many factors such as the shape of the water basin and the direction of the Earth's rotation. A simplified answer focuses on the gravitational forces between the Earth, Moon, and Sun. Any two bodies in space will exert a gravitational pull on each other. The Earth and Moon are two such bodies. The Moon is much smaller than the Earth but still influences it. Over 70 percent of the Earth's surface is covered with water which is pulled toward the Moon. Even the ground responds to this gravitational pull, but is less noticeable.

At the same time, there is a corresponding bulge on the backside of the Earth. Explanations for this bulge vary and involve the Earth's rotation, centripetal/centrifugal force and the result of land under water being pulled toward the Moon. In a simplified model, any place on the earth's surface will pass through both of these bulges during each 24 hour revolution. Each bulge results in a high tide. So, we have two high tides each day: one when we are close to the Moon, the other when we are far from it. The spaces between the bulges have had the water pulled from them, resulting in two low tides each day.

These high and low tides do not occur at a set hour every day. Instead, each one happens about 50 minutes later than it did the day before. Why? The earth completes a rotation each day while the moon's revolution around the earth requires approximately 28 days. Imagine standing at Ship Harbor with the moon directly overhead. If you stayed for 24 hours, you'd experience one complete rotation of the Earth. When you and Ship Harbor returned to your "starting point," the moon would no longer appear overhead. Instead it would have moved about 1/28th of the way around the Earth. Therefore, the Earth must continue revolving for approximately 50 minutes to "catch up" with the Moon.

The Sun also influences the tides. Being so far away, it plays less of a role than the moon. But, because of its large size, it still has quite a pull. When the Earth, Moon, and Sun are all in line (at each full moon and new moon) the high tides are extra high and the low tides are extra low. These extreme tides are called spring tides. (They have nothing to do with the season of spring, but come from the Old English word meaning to spring up). When the Sun and Moon are at right angles to each other (at the first and third quarter moons) their pull on the tides works against each other. At such times, the tidal change is the least significant. These small tides are called neap tides (and come from the same word as nap).

The diverse sea life in the intertidal zone is a valuable resource. The National Park Service at Acadia National Park is charged with the protection of this fragile area. We invite investigation but ask that all organisms remain undisturbed. Please leave behind any plant or animal (living or dead), sand, rocks, or any other natural material. Enjoy and explore a unique region, but take part in the protections and preservation of this habitat.



Fact Sheet

Suggestions for a Low Impact Visit to the Shore

Always consult a tide chart before planning your trip! Also take into consideration that on the day of your trip, if seas are rough, tidepools may not be as exposed and extra caution for safety is advised.

Park staff encourages visitors simply to explore and watch intertidal animals rather than disturb them from their natural environment. You can learn a lot by watching them in their habitat! However, if you choose to allow your group close up inspection of some of these critters, please follow these guidelines:

- Never force an organism from its home if it is reluctant to “let go.” Sea urchins’ and sea stars’ delicate tube feet are easily torn. Slow, gentle nudging may release an animal’s grip. Limpet shells are easily broken and should be left in tidepools undisturbed.
- Never remove excessive quantities of seaweed.
- Keep cold water in the containers at all times.
- Limit the number of common organisms examined. If possible, select only one organism of each species for examination.
- Return organisms to the exact locations they were found.
- If examining a mudflat, please ask your group to be considerate about digging. If any digging takes place, it should be done as a demonstration, rather than have each individual in an entire group scrounging beneath the surface to see what they can find.

Tips for Exploration

- Look underneath seaweeds; they provide great moist environments where creatures (especially crabs) may hide while the tide is out!
- Animals may hide if water is disturbed. Observe tidepools carefully before reaching in to explore.
- Allow sufficient time for independent exploration. Discovery brings out magic.
- Have fun and be safe. Remember, seaweed is slippery!



Fact Sheet – Common Intertidal Animals

BLUE MUSSEL

Mytilus edulis—A common tidal creature, the blue mussel's two identical shells joined by a hinge identify it as a bivalve. They grow to about 4 inches. Tough byssal threads help secure the blue mussel to rocky surfaces. Food is ingested after slightly opening the shell to allow water to move through its body cavity. The blue mussel then extracts microscopic plants and animals, trapping them on sheets of mucus.

COMMON PERIWINKLE

Littorina littorea—This small snail is well known to tidepool explorers. Scattered everywhere in the upper and mid tidal area, the periwinkle is identified by its somewhat flattened conical shell in shades of olive to gray. The elliptical opening of the periwinkle is protected by a hard plate (operculum) that closes to protect the snail from drying out or from predators. Periwinkles inch along tidepools with a muscular foot, and feed by scraping algae off of rocks using its radula, a tongue-like appendage with rough pointed teeth.

DOG WHELK

Thais lapillus—Found in the mid tidal area, the dog whelk is distinguished from the periwinkle by its pointed spiral shell, colors of yellow, orange, cream or brown appearing in bands, and the obvious groove in the dog whelk's shell opening. This groove is used for the dog whelk's radula, adapted to drill through mollusk shells to eat the animal inside. Small, rice-like grains in clusters attached to the sides of tidepools are the dog whelk's eggs.

GREEN CRAB

Carcinus maenas—This relatively small crab, only 3 inches in size, is found in upper tidepools, mudflats, and salt marshes. Despite the small size, they can give quite a pinch. It is a scavenger that feeds on decaying plants and animals. Look for it under rockweeds —watch it walk sideways to get away!

SEA STAR

Asterias vulgaris—Although immediately identified by its five arms, there are many variations in this popular tidepool creature. They can grow up to 8 inches and come in hues of orange, red, purple, brown, and yellow. Hundreds of tube feet, operated by the sea star's "hydraulic system," move the animal along in the lower tidepools. Sea stars are predators, and eat animals like mussels by encircling the shell with its arms and then pulling the shell open. The sea star places its stomach inside the shell and then ingests the animal.

SEA URCHIN

Strongylocentrotus droebachiensis—Appearing as green pin cushions, sea urchins are found in the lower tidepools. A relative of the sea star, the sea urchin also has five arms, easily seen by looking at one of the empty shells commonly found broken on the rocks. (Sea urchins are a favorite food of sea gulls!) Sea urchins move with tube feet and feed by using five triangular teeth to scrape algae from rocks.

SEA CUCUMBER

Cucumaria frondosa—An odd creature, this leathery animal can look like a small fat football or a long rubbery cucumber. Five rows of tube feet connect this animal to the same family as the sea star and sea urchin. Tentacles that are often hidden from view protrude to feed on microscopic plants from the ocean waters. When seriously disturbed or threatened the sea cucumber may try to escape by throwing up its internal organs. The amazing thing? They will regenerate their organs, just as a sea star can re-grow its arms.

HERMIT CRAB

Pagurus sp.—The small hermit crab looks for its own home by choosing empty periwinkle and dog whelk shells to fit its soft abdomen, providing it with protection. Its five pairs of claws are well adapted for its life in a borrowed home—the front two are for grabbing, the two middle pairs are for walking, and the last two pairs help the snail stay snug inside the shell.

LIMPET

Acmaea testudinalis—Appearing as a small conical hat on tidepool rocks, this little snail forms a strong attachment to the rocky bottoms and sides of tidepools with its muscular foot. It clamps down tight to withstand both crashing waves and periods of exposure. Trying to remove a limpet from a tidepool could seriously injure the animal.

ROCK BARNACLE

Balanus balanoides—Common in the upper intertidal areas, barnacles blanket the rocks creating a whitish stripe that help distinguish one of the intertidal zones. Barnacles have a six-sided conical shell which protects the small crustacean—a relative of crabs, lobsters, and shrimp. When the tide comes in, barnacles feed by opening the hinged plates on top of its shell extending its six pairs of feathery feet to filter microscopic plants and animals from the water.



Fact Sheet – Common Intertidal Plants

KELPS

Various—Kelps are large brown algae that come in a variety of species. All kelps have a holdfast to attach the kelp to rocks, a stipe (similar to a stem), and a blade. The long and wavy large sugar kelp that grows to 10 feet in length, the odd sea colander that has a hole-riddled blade, and the horsetail kelp, that has long wavy fingers can all be found in the lower tidepools where the tide rarely leaves them exposed.

BLADDER WRACK

Fucus vesiculosus—Dominating the mid tidal range, bladder wrack is an olive brown algae with flattened blades up to two feet in length. Its name comes directly from the air bladders that are paired along the blades. Swollen receptacles at the end of the blades are for reproduction.

KNOTTED WRACK

Ascophyllum nodosum—Knotted wrack has narrow leather blades and is found in association with bladder wrack. Its tangled clumps create dense forests for intertidal animals to hide in. Like the bladder wrack it also has air bladders which help the seaweed to float during high tide. Both bladder wrack and knotted wrack make up the rockweed zone, one of the five distinct zones in tidepools.

IRISH MOSS

Chondrus crispus—A short and frilly red seaweed, Irish moss is found in the lower intertidal zone. Its color is obvious during low tide when brownish-red bands of Irish moss can be seen.

SECTION THREE – FACT SHEETS

Chapter Eighteen – Resource Management

- Protecting Park Resources
- Downeast and Downwind —Air Quality
- Water Quality
- Fire Management
- Lands
- Acadia's Outer Islands
- Visitor Use
- Curatorial Management
- Other Important Resource Management Responsibilities





Fact Sheet

Acadia National Park – Protecting Park Resources

A successful natural and cultural resource program that is scientifically based and professionally staffed is critical. Not only should the National Park Service staff be aware of the resource conditions and issues affecting them, but so should park visitors. An informed public is Acadia's most important ally. Armed with stewardship partners and reliable scientific data, Acadia National Park stands prepared to meet future challenges that include:

- Air pollution
- Accelerated rates of freshwater and coastal marine pollution
- Impacts of recreation on visitor experiences and park resources
- Protection of federal and state listed rare species and communities
- Restoration of disturbed landscapes
- Non-native plants
- Management of nuisance wildlife
- Private property encroachment and habitat fragmentation
- Lack of baseline information
- Compliance with federal and state laws
- Significant cataloging backlog

Common to all of this work behind the scenes is the need to understand the elements protected within the park, ecosystem functions, and human-caused changes over time. For current research, go to www.nps.gov/acad/rm/research.htm.

INVENTORY – IDENTIFYING PARK RESOURCES

An inventory is a snapshot of a part of the park that shows the condition of park resources at a point in time. Some park resources, such as rock outcrops, carriage roads, and historic buildings are relatively easy to observe. Other resources such as small mammal populations or ferns, require a more intensive inventory.

MONITORING – STUDYING CHANGES

An inventory may be a snapshot of a part of the park; but just as a person's appearance changes between pictures taken years apart, the park is constantly changing. By monitoring resources, park managers can keep track of changes, learn what the normal and natural condition of park resources is, and detect when something is wrong. Water and air quality monitoring are two examples.

SCIENTIFIC RESEARCH – UNDERSTANDING HOW AND WHY

Scientific research is a tool used to understand the natural world, suggest how to repair any damage discovered through inventory and monitoring, and answer pressing questions. Some research questions at Acadia National Park include:

- Do high levels of ozone affect Acadia's forests?
- Why have there been mass die-offs of frogs in some of Acadia's wetlands?
- Why are Acadia's bald eagles not raising many chicks?

MANAGEMENT – FINDING SOLUTIONS

After all information is collected, the data is examined and its implications are considered. Park stewards try not to interfere with natural changes. Human-caused changes can be harmful, however, and solutions must be developed to protect park ecosystems. This is the management in resource management at Acadia National Park. One example of a solution to a serious wetland threat is the control of the non-native invasive purple loosestrife.

RESOURCE PROTECTION – TAKING ACTION

The staff at Acadia National Park is a team sharing a common goal: resource protection. Everyone is involved in putting management solutions into action. Rangers inform visitors of the regulations protecting the park and, if the regulations are disregarded, issue a warning or citation to remind them of the seriousness of resource protection.

- Administrative officers see that needed equipment is available.
- Park educators offer ranger programs for visitors and school children so the public understands park resources and what can be done to protect them.
- Trail crews maintain the trails so that hikers do not trample plants.
- Park visitors are also part of the team, picking up litter and enjoying the park.

EVALUATION – INSURING THE BEST SOLUTIONS

Once a management plan is in action its success is evaluated to determine if changes are needed. This often involves monitoring the success of an action, discussing the solution with experts, or conducting research to determine if the action unintentionally affects another part of the park.

COOPERATING WITH OTHERS – SHARING RESOURCES

National parks may be refuges for nature, but they are not isolated. What happens outside the park can have profound effects inside the park. The reverse is true as well. Air quality is an excellent example of how Acadia works with groups from four northeastern states and four Canadian provinces for the same objective: clean air.



Fact Sheet

Downeast and Downwind – Air Quality

Acadia National Park is downwind from large urban and industrial areas in states to the south and west and, as a result of long-range transport, periodically experiences high concentrations of air pollutants. Although spectacular vistas are still common in Acadia, pollutants from upwind sources contaminate park air and degrade visibility.

In 1979, the National Park Service established a comprehensive air resources management program at Acadia, a Class I area under the Clean Air Act, to better assess air pollution impacts and protect air quality related resources. One of 14 national parks selected nationwide, Acadia serves as a regional index site to monitor environmental stressors and related ecosystem response.

The air resources management program includes: 1) monitoring to establish a baseline for selected pollutants and assess trends, 2) support biological effects research, and 3) regulatory interaction with state and federal agencies. The four major concern areas are:

- **Atmospheric deposition:** Includes rain, fog, snow. pH levels lower due to sulfur and nitrogen oxides, creating acidic conditions that some species may not survive.
- **Ozone effects:** Ground level ozone, formed in a chemical reaction between nitrogen oxides, volatile organic compounds and sunlight, affects much of the Maine coast at times in the summer. Ozone can cause breathing problems and may harm certain plants.
- **Mercury deposition:** Originating from natural sources, power plants, incinerators and industry, mercury can travel long distances and be deposited even in remote areas. It can affect nervous systems and reproduction.
- **Visibility problems:** Particulates (solid particles and liquid droplets) come from both human activities (power plants, industry, motor vehicles, fireplaces) and natural causes (forest fires). The result is a haze that obscures long-range views.

MONITORING PROGRAM

Pollutants

- **Ground-level Ozone,** *continuous monitoring, 1982-present at McFarland Hill, 1995 —present at Cadillac Mountain.* Acadia periodically violates the federal standard for ozone, exceeding the standard eight days in 1998, six days in 1999, and three days in 2000. High ozone events at Acadia are typically the result of long-range transport, with peak concentrations usually occurring between 6 pm and midnight. An ozone advisory program has been developed to alert park visitors and employees of unhealthful ozone occurrences.

- **Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOC)**, *continuous monitoring, 1995-present*. NO_x and VOC's are precursors to ozone formation. Of the two, NO_x is considered the limiting precursor in ozone formation, and is found in very low concentrations at Acadia.
- **Sulfur Dioxide (SO₂)**, *continuous monitoring, 1988-1990*. Because sulfur dioxide gas is found in very low concentrations at Acadia, continuous monitoring was discontinued after establishing a two-year baseline.

Meteorological Monitoring

- **UV monitoring** was initiated in 1998 to detect changes in the intensity of UV levels. Years of monitoring to detect trends are required. A study was initiated in the spring of 2000 to measure UV intensity, water quality, and other habitat variables in park wetlands. One objective of the study is to determine whether UV radiation may be a factor in amphibian decline.
- **Continuous monitoring**, *1993-present*. Wind direction, wind speed, temperature, dew point, solar radiation, and precipitation.
- **Non-continuous**, *(daily), 1926-present*. Precipitation, temperature.

Visibility Monitoring

The primary objectives of visibility monitoring are to: 1) establish baseline data and track trends of fine particulate concentrations, 2) determine the relationship between visibility impairment and various atmospheric particulate constituents, 3) determine sources of particles producing visibility impairment, and 4) determine the sensitivity of various sites to varying concentrations of particles. There are 3 major components to the visibility monitoring program:

- **Fine particulate monitoring**, *1987-present*. Sample particulates in the 0-2.5 (fine), and 0-10 (PM₁₀) micron size ranges, are analyzed for their chemical composition and probable source.
- **Optical monitoring** uses specialized equipment to measure light extinction and calculate standard visual range. In episodes of haze, light transmission is reduced.
- **Scene monitoring** utilized a 35mm camera photography to characterize visibility (1980-1995). Acadia is one of three sites in the northeast displaying continuously updated visibility photos and corresponding air quality conditions on the CAMNET website.

CONCERNS OF LONG-TERM EFFECT FROM POOR AIR QUALITY IN ACADIA

Atmospheric Deposition

Acid precipitation (rain, snow, and fog) can be a major influence on lake and stream chemistry, cause nutrient enrichment in estuaries, and affect sensitive vegetation. Research and monitoring at Acadia since the early 1980s has found that most park surface waters (lakes and streams), on average, are non-acidic. However, short-term episodic acidification of many lakes and streams does occur, especially during spring snowmelt and runoff. In addition, alkalinity values at Acadia (which are related to the ability of water to neutralize or buffer acidic inputs) are among the lowest in the region. Recent research indicates alkalinity in some waters continues to decrease despite recent reductions in sulfate deposition, a pre-cursor to acid precipitation.

Ozone Effects on Park Vegetation

Summer ozone levels occasionally exceed federal health standards. The highest ozone concentration reported in Maine was measured at Acadia on June 15, 1988. Ozone concentrations even below the federal health standard have been shown to damage sensitive park vegetation.

Ozone-sensitive plant species growing naturally in the park were surveyed in August (1992-97) to determine the existence and extent of ozone injury. The surveys focused primarily on broad-leaf aster and spreading dogbane. In 1995 through 1997, visible injury was observed on less than 10 percent of dogbane and aster plants examined. This low incidence of injury is consistent with low ozone levels recorded in the park during these years. A companion study looked at white pine tree ring growth and ozone levels, assessing tree-ring width, climate variables (precipitation and temperature), and ozone levels for a 10 year period. Tree ring growth was shown to be limited in relation to ozone levels in seven out of eight white pine stands.

Evaluate Mercury Contamination in Aquatic Environments

Recent studies discovered high concentrations of mercury in several freshwater fish species sampled in park lakes. The major source of mercury in lakes appears to be deposition from the atmosphere, and it then concentrates in the food chain. Consumption of mercury-contaminated fish can be harmful to humans as well as to other wildlife.

One study evaluating mercury concentrations in fish from lakes in Acadia National Park found that some warm water species (bass, perch, pickerel) from selected lakes sampled, mercury concentrations were above U.S. Environmental Protection Agency human health standard of 1 part per million. Concentrations in cold water species (trout, salmon) in lakes sampled were generally within acceptable limits except for those at highest risk e.g. nursing mothers, children.



Fact Sheet – Water Quality

It may appear that Acadia's lakes and ponds are largely untouched by human influences, but they are impacted by development within and adjacent to park lands. Increased water withdrawals, sewage disposal, and non-point source pollution are very real concerns.

Other impacts to Acadia's water resources may come from oil or hazardous waste spills, landfills, and atmospheric deposition (acid precipitation). In addition, Acadia National Park has limited jurisdiction over many of these water resources within the park boundaries. Seven towns, two counties, four municipal water districts, and numerous state and federal agencies all hold interests in their management.

Considering these complications along with the heavy visitation to Acadia National Park, it is imperative that water resources be monitored closely. Acadia National Park's lake monitoring program provides baseline information characterizing physical and biological conditions. Information collected today supplements a data history extending back to 1942, providing a base to help identify future impacts and threats, and to document changes to these water resources.

ACADIA'S MONITORING PROGRAM

General sampling of many selected lakes occurs once in the spring and again in the fall. A subset of lakes and ponds are sampled monthly for surface temperature, pH, color, alkalinity, and other measurements. Why are these tests important? What do they reveal about Acadia's water resources?

Temperature

Temperature influences numerous biological activities in water systems. The solubility of compounds, the density of water, the levels of dissolved oxygen, the distribution and abundance of organisms, and their metabolic rates (not to mention the comfort of swimmers in cold lakes!) are all affected in one way or another by temperature.

Dissolved Oxygen

Oxygen is as necessary for aquatic organisms as it is for terrestrial. Free oxygen in water, known as dissolved oxygen, comes from two primary sources—the atmosphere and photosynthesizing aquatic plants. Dissolved oxygen levels are an indicator of the life support system of a water body and can be influenced by many factors.

A drop in dissolved oxygen occurs when oxygen is used by aquatic species and when algae, bacteria, and dead organisms decay. Very productive lakes produce more algae which in turn produce more oxygen. The mass die-offs of the algae can then deplete oxygen supplies due to decomposing bacteria's oxygen use. Sometimes large algal blooms can occur from excess nutrients, such as fertilizer run-off or atmospheric deposition, or leaching landfills. This is known as eutrophication. Seasonal temperature changes affect the level of dissolved oxygen as well—cold water holds more oxygen than warm water.

Transparency

Transparency, an important measure of water quality, indicates how far light can penetrate into the water column. It will change throughout the year due to spring and fall changes in algae and other dissolved, suspended material. Some reduction in visibility is normal; too much reduction may serve as a warning flag. For example, algae and zooplankton provide the base for the aquatic food chain. Too many decomposing algae reduce oxygen levels. Too much silt could indicate local erosion and present a problem for gill breathing organisms, and limit photosynthesis in aquatic plants.

pH

Determining how acidic or basic (alkaline) a body of water is helps determine the overall quality of the water and habitat suitability for organisms. The pH scale measures acidity/alkalinity on a scale of 0–14. Levels below 7 are on the acidic side; above 7, alkaline. pH 3 is 10 times more acidic than pH 4 and 100 times more acidic than pH 5. The optimum pH range for most organisms is between 6.5 and 8.2.

The effects of atmospheric deposition which can alter pH levels are a major concern at the park. Acid precipitation (rain, snow, and fog) can influence lake and stream chemistry, and cause nutrient enrichment in estuaries. The major lakes and ponds of Acadia have near-neutral pH levels that appear to be relatively stable over time. The buffering capacities of park lakes are generally very low, making them potentially vulnerable to episodic acidification considering the average rainfall pH in the region is less than 4.6. This occurs occasionally in some of the park's headwater streams.

Other Tests

Other tests to determine water quality include bacterial samples (done on selected lakes at Acadia) and conducting various nutrient tests (for example, nitrogen and phosphorus). Another discovery found through sampling is the discovery of high concentrations of mercury in several freshwater fish species. The major source of

mercury in lakes appears to be deposition from the atmosphere, where it can concentrate in the food chain. Consumption of mercury-contaminated fish can be harmful to humans as well as to other wildlife.

Acadia National Park's water resources are generally considered healthy and well-suited to their uses despite current impacts. The continued monitoring of selected lakes allows managers to remain aware of significant changes which may indicate the need for better understanding or intervention.



Fact Sheet – Fire Management In Acadia National Park

The fire management program at Acadia National Park performs a full range of wildland fire management operations and services. These include fire prevention, education, preparedness, suppression, prescribed fire, hazard fuels management, the reduction of wildland/urban interface hazards, monitoring, and research. The program also conducts wildland fire prevention operations and provides fire management assistance to nine other National Park Service units in New England and New York State.

Some of the activities carried out by the fire management program include:

- Wildland urban interface education and outreach
- Operation of four wildland fire suppression engines and one water tender
- Maintenance of a hundred person fire cache and a twenty person fire cache
- Maintenance of a trained cadre of primary and incidental wildland firefighters
- Use of prescribed fire for management of park vistas
- Mechanical removal of hazard fuels in high use areas
- Creation and maintenance of boundary fuel breaks along park boundaries
- Monitoring of prescribed fires and long-term forest conditions
- Research into fire effects and the long-term history of wildland fire in the park

The fire management staff also administers the Rural Fire Assistance Program which provides federal financial assistance to rural fire departments. Mobilization of park and other North Country Area firefighters to out-of-state fires is coordinated and directed by the fire management staff. This mobilization service is also provided to wildland firefighters from other federal agencies in the area, including the Bureau of Indian Affairs and the U.S. Fish and Wildlife Service, and to local Indian tribes. Structural fire prevention operations include the inspection and maintenance of fire extinguishers, acquisition and maintenance of fire detection and fire suppression systems in park buildings, and coordination with local fire departments that provide structural fire suppression services for park buildings. The fire management staff also provides professional, technical, administrative and logistical support to the fire management programs of the eleven other NPS units in New England area parks. These programs protect the lives of park staff, visitors and neighbors, provide wildland and structural fire protection to the 48,000+ acres of land and 150+ buildings that make up Acadia National Park, and assist nine other National Park Service units in the protection of their people and resources from fire.

FIRE ECOLOGY

Fire ecology studies the role of wildland fire and how it relates to the living and non-living environment. All living components in the environment eventually die and are in a continuous process of being built up or reduced and recycled. This ebb and flow makes life possible by seeking a balance between all components, living and non-living. Fire is studied as a natural process operating as a component of an ecosystem. To understand an ecosystem requires looking beyond the ecosystem's present state.

A full understanding includes an investigation of the ecosystem's origin, the cycles the system progresses through, and possible future stages. Fire is one of many natural events that promote change in an ecosystem. Prior to 1930, most researchers believed all wildland fire was bad. In the years following many began to challenge the negative notions about wildland fire, and this new thinking prevails today. They argued that fire was essential to many plant and animal communities. It is the common belief today that fire is required in some ecosystems to help in the decay of dead plants, breaking down and recycling the nutrients, and in preparing seedbeds for some fire dependent species.

The history of fire in Acadia National Park extends back thousands of years. Park researchers have used several methods to determine when and why fires occurred in both pre-and post-European settlement periods. By analyzing pollen grains captured in the sediment of the lakes within the park, the researchers have determined that the forest composition has changed over time. Prior to 2,000 BP, northern hardwoods and hemlocks predominated. Over time the area climate cooled and red spruce began to increase. As Native Americans used the area, fire occurrence increased allowing other species to appear. Some scholars suggest that Native Americans may have started periodic fires to encourage the growth of paper birch for their own use. After the Europeans settled the area, the evidence shows a much higher incidence of fire. At present much of the area within the park is forested with a spruce/fir forest mixture.

Natural fire ignitions (lightning) are, and most likely were, of little importance in accounting for less than 2% of all fires in the park between 1936 and 1991. The moist, humid climate of coastal Maine does not encourage natural ignitions. This lack of fire causes large amounts of dead and down wood (fuels) to accumulate on the forest floor. Fuels can also include foliage or grass. They may be fine, such as twigs or needles, or heavy such as logs, branches, or whole trees. They may also be living such as understory layer of tree regeneration or a layer of shrubs. If the fuel load is light a fire may burn through the forest with a very low intensity, typically

consuming only the litter on the very top of the ground. If the fuel load is heavy the fire intensity may become very high. As the forest ages the canopy breaks up allowing younger trees to sprout and grow. This understory layer forms a "ladder" of fuel that may allow an intense fire to ascend in the tops of the trees, creating what we know as a highly destructive "crown fire."

In order for an ignition to take place the fuels must be dry. As summer advances the moisture content in the fuels may go down in a dry year. The State of Maine is currently in a prolonged drought. If conditions are right, the park may experience periods of very high fire danger. There is adequate evidence that periodically, at intervals of a few hundred years, an extremely destructive fire has burned portions of Mount Desert Island.

Fire has naturally occurred for thousands of years prior to settlement. For many ecosystems fire is a natural catalyst for species diversity and a healthy forest. Without periodic fire, the land can become an overstocked monoculture, plagued with excessive fuel accumulation, stagnation, and below normal reproduction, which ultimately encourages widespread disease and insect infestations.

Fire is and has been a natural part of the ecosystem at Acadia National Park, renewing and recycling the forest at periodic intervals. However, the area of Acadia National Park and the neighboring towns and villages are in such close proximity to the forest themselves that allowing a fire to burn in a natural state is not an option. It has often been said that we really don't prevent forest fires, we just defer them. Wildland fire will always present a risk to homes built in the wildland. The park is attempting to address this issue by making its neighbors aware of the problems inherent in living in the wild land/urban interface.

Indeed as the park moves into the new millennium it faces questions on how the ecology of the park might use the beneficial effects of fire. Prescribed burns are now being conducted in some areas of the park to maintain overlook and scenic vistas.

See also Fire of 1947 on page 3-113.



Fact Sheet – Lands

Acadia National Park is one of the few national parks created virtually entirely of donated lands to the federal government. In addition, Congress gave the National Park Service the responsibility to hold conservation easements on private property within the Acadian archipelago. The park's lands program is charged with keeping records of these properties, marking and monitoring park boundaries, and working together with interested landowners to protect the ecological, cultural, and scenic values of their holdings. Specific components of the lands program include:

Conservation Easements

The National Park Service at Acadia National Park currently holds conservation easements on 166 properties in 18 towns. All easements but one are on islands. These conservation easements protect over 11,000 acres of land. Ongoing activities include:

- Evaluating properties offered to the National Park Service as potential conservation easements
- Working with landowners interested in establishing conservation easements to devise appropriate strategies to protect their properties
- Monitoring properties held by the National Park Service to insure compliance with the terms of their conservation easement
- Resolving conflicts on conservation easement properties that are held by the National Park Service

Boundary Management

Acadia National Park has approximately 120 miles of boundary, not all of which are marked or surveyed. Ongoing activities include:

- Monitoring development on lands adjacent to the park to ensure that activities on private property do not encroach on or damage park resources
- Clearing, marking, and surveying park boundaries

Geographic Information System (GIS)

A Geographic Information System (GIS) is a computer system (hardware, software, data, and operator) that can store and analyze geographic data. With GIS, maps are easy to update and can be re-printed as information changes. The power of GIS, though, is really in its ability to easily and quickly analyze information which would, using paper maps, be tedious and difficult. Using GIS, you could easily calculate, for instance, the area of wetlands within the park boundary by overlaying the two data layers, wetlands and park boundary. GIS can also be used to model such things as the spread of fire or determine where to site a new trail or radio tower to reduce visual and environmental impact.

The park has been building a Geographic Information System (GIS) since the 1980s. Maps and analyses are routinely made for reports, presentation, fieldwork, and planning by park staff and researchers. Some examples:

- *Trail Maps*: The park has been using a global positioning system to map the routes of the current hiking trails. This information is being used as part of a National Park Service planning effort to develop an Acadia National Park Trails Management Plan.
- *Bedrock Map*: This shows how map, text, and imagery can be combined using GIS software to produce an informative and visually appealing poster.
- *Fire Effects*: Studies are being conducted on the ecological effects of the 1947 fire. Mapping the location of the fire and the park's freshwater resources helps investigators answer some key research questions.

Scenic Vistas

Acadia National Park protects a landscape of rare scenic beauty. The vistas from the high rocky headlands encompass forested woodlands, shimmering lakes, quiet marshes, bold rocky shores, and coastal islands. On all sides, the ocean that surrounds and bisects the park strongly influences the park's character.

Both the motor road system and the (non-motorized) carriage road system at the park were carefully laid out by prominent landscape architects to take advantage of these spectacular views. Although they are dependent on the natural landscape of Acadia, these designed landscapes have themselves become significant, owing to their history and the sensitivity with which they were designed and built. In recent years, park staff has been actively restoring historic vistas on the carriage road system.



Fact Sheet – Acadia's Outer Islands

While the Mount Desert Island portion of Acadia National Park receives most of the publicity and visitors, the park also administers all or part of fourteen other far less visited islands, from Isle au Haut to St. Croix, on the border of Canada's New Brunswick. Several of these islands are connected to the mainland or larger islands by gravel bars while others are a short boat trip from a launch site. One site is quite remote.

The National Park Service (NPS) recently completed a preliminary inventory of flora and fauna on most of these islands and recorded anecdotal observations of current human use. Several of the islands harbor nesting bald eagles or colonial nesting seabirds, while others contain concentrations of plants rare in Maine. Visitor use is affecting these sensitive resources, and the park will manage the islands more actively in the future with more frequent island patrols.

PARK REGULATIONS ON ISLANDS

Several NPS regulations are essential to island preservation and provide general guidelines for use. Fires and camping are prohibited throughout Acadia National Park with the exception of Mount Desert Island and Isle au Haut, where they are permitted in designated campgrounds. Fires are also permitted in designated picnic areas only. Pets must be on a leash at all times and are prohibited under some circumstances. Feeding wildlife and picking wildflowers or other plants is prohibited throughout Acadia National Park.

THE ISLANDS

Acadia National Park does not encourage visitors to visit these islands, but does not discourage them either except as noted below. Because of the variability of wildlife breeding chronology and the availability of new information each year, contact the park for the latest information before planning a visit.

Schoodic Island is an undeveloped, easily accessible island southeast of Schoodic Peninsula. Despite its apparent ease of access, Schoodic is noted for its rough waters. The island has supported nesting bald eagles. Colonial nesting seabirds have also nested here for many years, and the island has been designated a Maine Critical Area for nesting common eider ducks. Schedule your visit outside the March 15–August 15 nesting season. Pets are prohibited between April 1–September 30.

Heron Island is a remote, undeveloped treeless island 7 km southwest of Swans Island and 1.6 km southeast of Marshall Island in Jericho Bay. Heron is also a Maine Critical area for the nesting common eider duck. Historically, great blue herons and black-crowned night herons nested here. Currently, many species of the colonial nesting seabirds are in residence during the spring and summer months. Heron Island also supports several species of state or locally rare plants. Schedule your visit outside the April 1–August 15 nesting season. Pets are prohibited between April 1–September 30. Tread lightly; step on rocks where possible and use any existing trails.

Sheep Porcupine Island is an undeveloped, forested island with steep, rocky cliffs on its south and east sides. Part of the Porcupine Island chain, it is located northeast of Bar Harbor. The island has supported nesting bald eagles. Schedule your visit outside the March 15–August 15 nesting season.

Bar Island, at the north end of Somes Sound, is a small, easily accessible, undeveloped island. Bar has also supported nesting bald eagles. Schedule your visit outside the March 15–August 15 nesting season.

Bald Porcupine Island is an undeveloped, easily accessible island south/southeast of Bar Harbor. A breakwater extends from near Mount Desert Island to the island. High, steep cliffs on the south and east sides are used by nesting and perching black guillemots. Bald eagles have nested here in the past and still use the island for perching. The island's name comes from earlier days when the forest was cleared for livestock grazing. Respect the eagles' need for space, and avoid disturbance to guillemots on the cliff.

The Hop is a small, easily accessible, undeveloped island in Frenchman Bay connected by a gravel bar to long Porcupine Island at low tide. It is currently used as a perching site for bald eagles. Respect the eagle's need for space.

Baker Island is south of Mount Desert Island and is almost connected at low tide to Little Cranberry Island. Most of the island is covered with red and white spruce except for the north end which is in fields and has several buildings. A few private property owners may be in residence during the summer months. The Baker Island Lighthouse, built in 1828, sits at the center of the island. During the summer season, visitors arrive daily and can enjoy a hike across the island. Respect historic buildings and private property.

Monitoring Assistance: If you discover campers or fires, or other inappropriate behavior, the park staff would appreciate notification as soon as possible at park headquarters. Any other observations would be helpful as well.



Fact Sheet – Visitor Use

With the heavy visitation at Acadia, visitor specific studies and recommendations have centered on high use areas to find solutions to resource degradation due to high levels of use. A visitor management/capacity planning process for Acadia National Park will start in 2003-2004.

CARRIAGE ROAD MANAGEMENT

Biking on the park carriage roads grew enormously in popularity in the 1980s. Complaints from visitors and residents about crowding and problem behaviors led the park to apply the Visitor Experience Resource Protection (VERP) Framework, a carrying capacity planning process. Dr. Robert Manning of University of Vermont conducted survey research on carriage road users from 1994-1996 to gather information to support the VERP process and eventual carriage road management decisions. Carriage road monitoring from 1997 to 2000 showed that carrying capacity standards were not violated.

CLIMBING

Rock climbing has increased greatly in popularity at Acadia since the early 1980s. Otter Cliffs became crowded largely because of its popularity with climbing groups, and soil erosion and vegetation loss there was severe. The installation of fixed protection was increasing at Acadia and of concern to managers, although it was not excessive when compared with other climbing areas in the region.

Between 1995 and 1997, Acadia National Park developed a climbing management plan with public input. To protect soils and vegetation from further damage, the park installed a limited amount of fixed protection at Otter Cliffs. Requests to install fixed protection are filtered by a climbing advisory group before going to the superintendent for approval. Fixed protection is prohibited in some climbing areas. Vegetative restoration work took place there in 1998 and areas are now roped off to prevent human activity and allow recovery. A portable toilet was installed in the parking area at Otter Cliffs in 1997. Group use of Otter Cliffs is now limited to two groups of 12 persons each day and reservations are required.

LEAVE NO TRACE

Leave No Trace is a nationwide low impact outdoor ethics program of the four federal land managing agencies. At Acadia, we are including the *Leave No Trace* principles in our signs, brochures, and other programs. Four ridge runners hired by Friends of Acadia (local park support group) began educating park hikers about *Leave No Trace* principles and building cairns in 1998. See page 1-21 for guidelines.

MOUNTAIN SUMMITS

Hiking is very popular in Acadia. The bare granite summits offer outstanding views of a mountain and ocean landscape. They also harbor some of Acadia's rarest plants. Acadia staff has been monitoring visitor use of some summits and contacting hikers about ways to reduce human impacts in these sensitive habitats.

TRAILHEAD SIGNS

In 1998, new signs were installed at seventeen major trailheads and six carriage road and trail access points. Each sign includes a map, low impact (*Leave No Trace*) guidelines, or carriage road courtesy guidelines. The signs were funded by the Georgia Pacific Company and a private donor with the help of Friends of Acadia.

VISITOR SURVEYS

In 1998, the National Park Service conducted two studies of visitors to Acadia National Park. Randomly selected individuals were asked questions about their current visit to the park, their opinions on several current and important issues (new transportation system, commercial services, and park fees), overall satisfaction with park facilities and programs, and their understanding about the mission of the National Park Service at Acadia National Park. Results of these studies will help guide several important decisions over the next five years. Visitor survey cards are now issued each year.



Fact Sheet – Curatorial Management

Most visitors may think of Acadia as only a “natural” park, but it holds a rich cultural heritage as well. Over 865,000 objects and documents are in the collection from both Acadia National Park and Saint Croix Island International Historic Site (overseen by Acadia National Park). Items in the collection date from 1596 to 1999 and include the following:

- Archeological materials (prehistoric and historic) related to ancestral Wabanaki sites in the park, the Carroll Farm Homestead, Islesford (Little Cranberry Island), and the settlement of Saint Croix Island
- Historic artifacts and archival documents pertaining to New France, George B. Dorr (one of the founders of Acadia National Park), the Cranberry Isles, the Mount Desert Island Region the Carroll family of Southwest Harbor, Maine Acadian Culture, park administrative history, and genealogy of the first settlers of the Cranberry Isles
- Plant and animal specimens related of Acadia National Park including the William H. Proctor invertebrate and the Harold White dragonfly/damselfly collections

ISLESFORD HISTORICAL MUSEUM

Founded by William Otis Sawtelle in 1919 and located on Little Cranberry Island. The permanent museum exhibits explore life in the Town of Cranberry Isles (a set of five islands located in the Gulf of Maine) during the 19th century, when schooners were the mode of transportation and oceans were the highways. Special exhibits are often displayed. The museum is open mid June to late September and admission is free.

WILLIAM OTIS SAWTELLE COLLECTIONS AND RESEARCH CENTER

Located in Bar Harbor at park headquarters, the center is dedicated to William Otis Sawtelle, founder of the Islesford Historical Museum on Little Cranberry Island. The center houses historic artifacts, archival documents, and natural history specimens currently not on exhibit at the Islesford Historical Museum or the Sieur de Monts Spring Nature Center. The museum items represent the natural and cultural history of Acadia National Park and Saint Croix Island International Historic Site; the Carroll Homestead of Southwest Harbor; George B. Dorr, one of the founding fathers of Acadia National Park; The Town of Cranberry Isles; “New France;” and the administrative history of Acadia and Saint Croix.

Over 865,000 artifacts, documents, and specimens, dating from 1596-1999, are in the museum collection. Special collections include:

- William Otis Sawtelle Collection (New France, Cranberry Isles)
- William H. Proctor Invertebrate Collection
- Harold B. White Odonata Collection
- Acadia National Park Administrative History Collection
- Ralph H. Long Ornithological Slide Collection
- Genealogy of the Cranberry Isles Collection
- Carroll Homestead Collection

The center is open Tuesday through Friday from 8:30am to 3:30pm, by appointment, year around. Access to the collection for scientific research, genealogical study, or development of a publication is permitted. Prospective researchers need to contact the park's Museum Curator for an appointment.

To arrange an appointment to conduct research or if you have research questions contact the park curator at:

Acadia National Park
c/o Curator
P.O. Box 177
Bar Harbor, Maine 04609
(207) 288-8729
e-mail: Brooke_Childrey@nps.gov

Archival documents in good condition (determined by the museum curator) may be photocopied for a small fee. Photographs (in good condition) may be reproduced for a fee (contact the curator for current prices). Artifacts may be loaned to other historic institutions for exhibitions.



Fact Sheet

Other Important Resource Management Responsibilities

The Environmental Compliance Program at Acadia National Park strives to ensure that all park construction, rehabilitation, and other projects or actions comply with all applicable federal, state, and local environmental laws and regulations. Applicable laws protect wetlands, air quality, water quality, endangered species and the cultural/human environment. For all major park activities, the public will have an opportunity to provide comments to the National Park Service in accordance with the National Environmental Policy Act.

The Integrated Pest Management (IPM) Program oversees the park's management of plant and animal pests. Pests are those species that interfere with the purposes of the park such as protecting natural or cultural resources, or visitor safety. For example, carpenter ants threaten the structural integrity of park buildings. Raccoons and red foxes can carry rabies and quickly learn to aggressively scavenge food scraps from campers and other visitors. Non-native diseases such as beech bark disease and white pine blister rust kill trees, and can change the structure, composition, and functions of forests in Acadia.

The National Park Service uses Integrated Pest Management (IPM) to manage these problems. This approach is based on proper identification of a pest and a thorough understanding of the biology of the pest species being managed. IPM minimizes the use of chemical treatments in favor of other actions such as prevention, education, monitoring, setting thresholds for tolerating the effects of pests, and alternative treatments, when appropriate. Chemical treatments are used only as a last resort, and only when shown to be the most effective and least damaging method of treatment.

SECTION THREE – FACT SHEETS

Chapter Nineteen – Cultural History

Park History

Carriage Roads of Acadia National Park

Acadia's Historic Trails

Fire of 1947

Portrait of Three 19th Century Families—The Carrolls, Hadlocks, and Gilleys





Fact Sheet – Park History

Deep shell heaps indicate American Indian encampments dating back 6,000 years in Acadia National Park, but prehistoric records are scanty. The first written descriptions of Maine coast Indians, recorded 100 years after European trade contacts began, describe American Indians who lived off the land by hunting, fishing, collecting shellfish, and gathering plants and berries. The Wabanaki Indians knew Mount Desert Island as Pemetic, “a range of mountains.” They built bark-covered conical shelters, and traveled in exquisitely designed birch bark canoes. Historical notes record that the Wabanaki wintered in interior forests and spent their summers near the coast. Archeological evidence suggests the opposite pattern; in order to avoid harsh inland winters and to take advantage of salmon runs upstream, American Indians wintered on the coast and summered inland.

NEW FRANCE

The first meeting between the people of Pemetic and the Europeans is a matter of conjecture. But it was a Frenchman, Samuel Champlain, who made the first important contribution to the historical record of Mount Desert Island. He led the expedition that landed on Mount Desert on September 5, 1604 and wrote in his journal, “The mountain summits are all bare and rocky... I name it Isles des Monts Desert.” Champlain’s visit to Acadia sixteen years before the Pilgrims landed at Plymouth Rock destined this land to become known as New France before it became New England.

In 1613, French Jesuits, welcomed by Indians, were believed to have established the first French mission in America on what is now Fernald Point, near the entrance to Somes Sound. They had just begun to build a fort, plant their corn, and baptize the natives when an English ship, commanded by Captain Samuel Argall, destroyed their mission.

The English victory at Fernald Point doomed Jesuit ambitions on Mount Desert Island, leaving the land in a state of limbo, lying between the French, firmly entrenched to the north, and the British, whose settlements in Massachusetts and southward were becoming increasingly numerous. No one wished to settle in this contested territory and for the next 150 years, Mount Desert Island’s importance was primarily its use as a landmark for seamen.

There was a brief period when it seemed Mount Desert would again become a center of French activity. In 1688, Antoine Laumet, an ambitious young man who had immigrated to New France and bestowed upon himself the title Sieur de la Mothe

Cadillac, asked for and received a hundred thousand acres of land along the Maine coast, including all of Mount Desert. Cadillac's hopes of establishing a feudal estate in the New World, however, were short lived. Although he and his bride resided here for a time, they soon abandoned their enterprise. Cadillac later gained lasting recognition as the founder of Detroit.

NEW ENGLAND

In 1759, after a century and a half of conflict, British troops triumphed at Quebec, ending French dominion in Acadia. With Indians scattered and the fleur-de-lis banished, lands along the Maine coast opened for English settlement. Governor Francis Bernard of Massachusetts obtained a royal land grant on Mount Desert Island. In 1760, Bernard attempted to secure his claim by offering free land to settlers. Abraham Somes and James Richardson accepted the offer and settled their families at what is now Somesville.

The onset of the Revolutionary War ended Bernard's plans for Mount Desert Island. In its aftermath, Bernard lost his claim, and the newly created United States of America granted the western half of Mount Desert Island to John Bernard, son of the governor, and the eastern half of the island to Marie Therese de Gregoire, granddaughter of Cadillac. Bernard and de Gregoire soon sold their landholdings to nonresident landlords.

Their real estate transactions probably made very little difference to the increasing number of settlers homesteading on Mount Desert Island. By 1820, farming and lumbering vied with fishing and shipbuilding as major occupations. Settlers converted hundreds of acres of trees into wood products ranging from schooners and barns to baby cribs and hand tools. Farmers harvested wheat, rye, corn, and potatoes. By 1850, the familiar sights of fishermen and sailors, fish racks and shipyards, revealed a way of life linked to the sea.

It was the outsiders—artists and journalists—who revealed and popularized this island to the world in the mid-1800s. Painters of the Hudson River School, including Thomas Cole and Frederic Church, glorified Mount Desert Island with their brushstrokes, inspiring patrons and friends to flock here. These were the “rusticators.” Undaunted by crude accommodations and simple food, they sought out local fishermen and farmers to put them up for a modest fee. Summer after summer, the rusticators returned to renew friendships with local islanders and, most of all, to savor the fresh salt air, beautiful scenery, and relaxed pace. Soon the villagers' cottages and fishermen's huts filled to overflowing, and by 1880, 30 hotels competed for vacationers' dollars. Tourism was becoming the major industry.

For a select handful of Americans, the 1880s and the “Gay Nineties” meant affluence on a scale without precedent. Mount Desert, still remote from the cities of the east, became a retreat for prominent people of the times. The Rockefellers, Morgans, Fords, Vanderbilts, Carnegies, and Astors, chose to spend their summers here. Not content with the simple lodgings then available, these families transformed the landscape of Mount Desert Island with elegant estates, euphemistically called “cottages.” Luxury, refinement, and ostentatious gatherings replaced buckboard rides, picnics, and day-long hikes of an earlier era. For over 40 years, the wealthy held sway at Mount Desert, but the Great Depression and World War II marked the end of such extravagance. The final blow came in 1947 when a fire of monumental proportions consumed many of the great estates.

Though the affluent of the turn of the century came here to frolic, they had much to do with preserving the landscape that we know today. It was from this social strata that George B. Dorr, a tireless spokesman for conservation, devoted 43 years of his life, energy, and family fortune to preserving the Acadian landscape. In 1901, disturbed by the growing development of the Bar Harbor area and the dangers he foresaw in the newly invented gasoline powered portable sawmill, George Dorr and others established the Hancock County Trustees of Public Reservations. The corporation, whose sole purpose was to preserve land for the perpetual use of the public, acquired 6,000 acres by 1913. Dorr offered the land to the federal government, and in 1916, President Wilson announced the creation of Sieur de Monts National Monument. Dorr continued to acquire property and renewed his efforts to obtain full national park status for his beloved preserve. In 1919, President Wilson signed the act establishing Lafayette National Park, the first national park east of the Mississippi. Dorr, whose labors constituted “greatest of one-man shows in the history of land conservation” became the first park superintendent.

In 1929, the park name changed to Acadia. Today the park encompasses close to 48,000 acres, and the simple pleasures of “ocean, forests, lakes, and mountains” that for over a century and a quarter have been sought and found by millions, are yours to enjoy.

See also appendix E for additional information.



Fact Sheet – Carriage Roads of Acadia National Park

Forty-five miles of rustic carriage roads weave around the mountains and through the valleys of Acadia National Park, the gift of philanthropist John D. Rockefeller, Jr., and family. Rockefeller, a skilled horseman, desired to travel on motor-free byways via horse and carriage into the heart of Mount Desert Island. His construction efforts from 1913-1940 resulted in roads with sweeping vistas and close-up views of the landscape. His love of road building ensured a state-of-the-art system. Rockefeller's love of road building grew naturally from his father's. John D. Rockefeller, Sr., the founder of Standard Oil, had built and landscaped carriage roads on his Ohio and New York estates. The junior Rockefeller learned many techniques from his father which he applied to building his Mount Desert Island carriage roads.

STATE OF THE ART ROADS

The carriage roads are broken stone roads, a type commonly built at the turn of the century. Acadia's roads are the best example of broken stone roads left in America today. They are true roads, approximately sixteen feet wide, constructed with methods which required much hand labor. The roads were engineered to contend with Maine's wet weather. Three layers of rock, stone culverts, wide ditches, and a substantial six to eight inch crown ensured good drainage.

Rather than flattening hillsides to accommodate the roads, breast walls and retaining walls were built to preserve the line of hillsides and save many trees. Rockefeller, naturally gifted with the eye of a landscape architect, aligned the roads to follow contours of the land and to take advantage of scenic views. He graded the roads so they were not too steep or too sharply curved for horse drawn carriages. Road crews quarried island granite for road material and bridge facing. Roadsides were landscaped with native vegetation such as blueberries and sweet fern. The use of native materials helped blend the roads into the natural landscape.

AN INTEGRATED SYSTEM

Rockefeller participated in the construction process. He walked areas staked out for road alignment and observed work in progress. He knew the laborers by name and used experts to design the bridges and engineer the roads. Throughout it all, he paid rapt attention to the minutest details, from the placement of coping stones, to the cost of a running foot of road.

Following are some elements that unify the carriage road system:

Coping stones

Large blocks of granite bordering the roads serve as guardrails. Cut roughly and spaced irregularly, the coping stones create a rustic appearance. These coping stones have been affectionately called Rockefeller's teeth.

Signposts

Cedar signposts were installed at intersections to direct carriage drivers. The posts were stained with Cabots shingle stain #248. The lettering was painted first with one coat of flat yellow paint, then with another coat of enamel yellow. Today, numbers are attached to the signposts which match maps and guidebooks, and help carriage road users find their way.

Roadside Grooming and Landscaping

Rockefeller employed a crew of foresters to remove debris from the roads and roadsides. Nationally known landscape architect, Beatrix Farrand, consulted on planting designs to frame vistas and bridges, and to heal scars left behind by carriage road construction. The Fire of '47 destroyed much of her work.

Gate Lodges

Two gate lodges, one at Jordan Pond and the other near Northeast Harbor, ornament the roads and serve as whimsical welcomes to the system. A third gate lodge was planned at Eagle Lake, but never built. During carriage road construction, engineer Paul Simpson and his family lived at the Jordan Pond Gate Lodge.

Bridges

Rockefeller financed 16 stone-faced bridges, each unique in design, to span streams, waterfalls, roads, and cliffsides. The bridges are steel-reinforced concrete, but the use of native stone for the facing gives them a natural appearance. Over time, the stone cutters grew very skilled and Rockefeller often requested them not to cut the facing too well lest the rustic look be lost!

The result of Rockefeller's vision and attention to detail is an integrated system of carriage roads that blends harmoniously with the landscape.

CARRIAGE ROAD REHABILITATION

In 1989, a historic resource study on the carriage roads was completed for the National Park Service. That study documented the sequence of the roads' development and construction and made recommendations for their rehabilitation and maintenance.

Between 1992 and 1995, the roads were extensively rehabilitated. Woody vegetation was removed from roads, shoulders, and ditches, and drainage systems were reestablished to arrest erosion. The crown and subgrade layers were restored and new surface materials applied to replace thousands of cubic yards washed away over the years. Coping stones were reset or replaced, and some of the historic vistas that once greeted horseback riders, carriage drivers, and walkers have been reopened. Rehabilitation was funded through a special program of federal construction funds with matching private funds. This funding will ensure that the roads will continue to be maintained in the future, close to their original condition.

A SPIRIT OF PHILANTHROPY

John D. Rockefeller, Jr., was one among several men and women who in some way contributed to the formation of Acadia National Park. Today, people still help preserve the park by donating time to work on trails and carriage roads, or to contribute financially to carriage road rehabilitation. Ask at the visitor center to learn how to join in these efforts. Such spirit allows the park to better meet its mission of protecting and preserving its cultural and natural resources for present and future generations.

See appendix F for a description of the carriage road bridges.



Fact Sheet – Acadia's Historic Trails

Mount Desert Island's present day trail system evolved over centuries of human use and settlement of the land. From American Indians who blazed trails on hunting forays, to European settlers who connected villages and harvested forests, their activities provided transportation routes on the island long before the first roads were built.

In the mid-1800s, rusticators came to the island to enjoy its beauty and to escape the bustle of large cities. They followed many of the existing paths and trails up mountains, through the woods, and along the ocean shoreline. Among the rusticators were Hudson River School artists Thomas Cole and Frederic Church. Their renderings of the island attracted city dwellers to experience the Maine coast. Many of those who traveled to the island were very wealthy. They built 80 and 100 room "cottages" in which to pass their summers. Some cottagers socialized at tennis matches, lawn parties, and horse shows. Others, like the rusticators before them, were lured by the natural beauty of the island and preferred hiking. By the end of the 1800s, an era of active trail building had begun. Trails lost their utilitarian origins and were transformed into paths that promoted interaction with, and enjoyment of, the natural landscape.

In 1891, the first extensive trail plans were drafted. Much of the trail building was sponsored by Village Improvement Societies. An innovative approach to funding construction was the creation of memorial paths. Individuals who financed a trail could name it after the person of their choice. Kurt Diederich's Climb, which ascends Dorr Mountain's east face, is a memorial path. Plaques were often set along the trails in memory of the person who was being honored.

Actual trail construction took innovative forms as well. Waldron Bates, chair of the Roads and Paths Committee of the Bar Harbor Village Improvement Association 1900-1909, was the first to incorporate stone stairways and iron rung ladders into trails to traverse cliffs, talus slopes, and other steep areas. An example of his work is Gorham Mountain's Cadillac Cliffs Trail. A plaque at the head of the trail memorializes Bates as *Pathmaker*.

Others who followed Waldron Bates carried on his legacy of innovation and craftsmanship. Rudolph Brunnow built the Precipice Trail over the formerly impassable cliffs of Champlain Mountain, and George Dorr, one of Acadia's founders and the park's first superintendent, promoted memorial paths. He oversaw the construction of several stairway trails leading from Sieur de Monts Spring to the summit of the mountain which now bears his name.

By 1915, over 200 miles of trails existed on the island. That same year, the state of Maine lifted the island's ban on automobiles. By 1920, the major trail building era had ended, while an interest in building motor roads intensified. The Seal Harbor Village Improvement Society recorded in 1929: "...an inevitable first effect of the oncoming of the automobile was the banishment of the horse and the desertion of foot paths and trails."

The Great Depression, however, brought the New Deal and the Civilian Conservation Corps (CCC) to Acadia National Park. Two camps were established on the island in 1933, one on McFarland Hill (now park headquarters), and the other just south of Long Pond on the west side of the island. A good deal of their work involved trails. East side crews primarily rehabilitated existing trails constructed by Village Improvement Societies. West side crews expanded the trail system on newly acquired tracts along the western mountains. The Perpendicular and Great Pond Trails are examples of work completed by the CCC.

Today, hikers can follow the footsteps of early settlers and American Indians, and outdoors enthusiasts of another era. Acadia's historic trails are still as challenging to present day hikers as to those of generations past, and their scenic values and ties to the landscape evoke the sense of awe experienced long ago.



Fact Sheet – Fire of 1947

Maine winters are long. Spring is always eagerly anticipated and this was especially true in 1947. The gloominess of WWII still lingered and everyone looked forward to the return of nice weather. Disappointingly, it rained continually through April, May, and most of June. Finally, at the end of June, the sun came out, temperatures soared, and a glorious summer emerged. But weather patterns continued to be odd that year. Through the summer and into the fall, Maine received only 50% of its normal rainfall. Vegetation became bone dry. Water supplies dwindled. Still, most people did not worry—rain would come eventually. The island enjoyed one of the most beautiful Indian summers in memory. But the autumn rains never came and by mid-October, Mount Desert Island was experiencing the driest conditions ever recorded. The stage was set for a disastrous blaze.

On Friday, October 17, 1947, at 4 pm, the fire department received a call from Mrs. Gilbert, who lived near Dolliver's dump on Crooked Road west of Hulls Cove. She reported smoke rising from a cranberry bog between her home and the dump. No one knows what started the fire. It could have been cranberry pickers smoking cigarettes in the bog. Or perhaps it was sunlight shining through a piece of broken glass in the dump that acted like an incendiary magnifying glass. Whatever the cause, once ignited, the fire smoldered underground. From this quiet beginning arose an inferno that burned nearly half the eastern side of Mount Desert Island and made international news.

In its first three days, the fire burned a relatively small area, blackening only 169 acres. But on October 21, strong winds fanned the flames and the blaze spread rapidly and raged out of control, engulfing over 2,000 acres. Personnel from the army air corps, navy, coast guard, University of Maine forestry program, and Bangor Theological Seminary joined local fire fighting crews. National Park Service employees flew in from parks throughout the east and additional experts in the west were put on standby.

The pace of the blaze intensified and nearly 2,300 acres burned on October 22. The fire crossed Route 233 and continued along the western shore of Eagle Lake. On the morning of October 23, the wind shifted, pushing one finger of the fire toward Hulls Cove. Firefighters shifted their efforts in an attempt to squelch the threat to that community. But in the afternoon, the wind suddenly turned again and increased to gale proportions, as a dry cold front moved through, sending the inferno directly toward Bar Harbor. In less than three hours the wildfire traveled six miles, leaving behind a three mile wide path of destruction. The fire swept down Millionaires'

Row, an impressive collection of majestic summer cottages on the shore of Frenchman Bay. Sixty-seven of these seasonal estates were destroyed. The fire skirted the business district, but razed 170 permanent homes and five large historic hotels in the area surrounding downtown Bar Harbor.

Bar Harbor residents not actively engaged in fire fighting tried to find safety, fleeing first to the athletic field and later to the town pier. At one point all roads from the town were blocked by flames, so fishermen from nearby Winter Harbor, Gouldsboro, and Lamoine prepared to help with a mass exodus by boat. At least 400 people left by sea. Finally, by 9 pm, bulldozers opened a pathway through the rubble on Route 3 and a caravan of 700 cars carrying 2,000 people began the slow trip to safety in Ellsworth. According to eyewitness reports, it was a terrifying drive- cars were pelted by sparks and flames flickered overhead. But the motorcade was orderly and successful, an uplifting end to a day that saw close to 11,000 additional acres blackened.

Still, the fire continued to burn. From Bar Harbor, the blaze raced down the coast almost to Otter Point, engulfing and destroying the Jackson Laboratory on its way. The fire blew itself out over the ocean in a massive fireball. But that wasn't the end of the destruction. Almost 2,000 more acres burned before the fire was declared under control on October 27. Organic soil and vegetation on the forest floor, along with matted tree roots infiltrating deeply around granite boulders, fueled stubborn underground fires. Even weeks later, after rain and snow had fallen, fire still smoldered below ground. The fire was not pronounced completely out until 4pm on November 14.

EPILOGUE

In all, some 17,188 acres burned. Over 10,000 acres of this was in Acadia National Park. Property damage exceeded 23 million dollars. Considering the magnitude of the fire, loss of human life had been minimal. An elderly man returned to his home to save his cat and was never seen alive again. A car accident claimed the lives of an air force officer and a local teenage girl. A man and woman, already ill, succumbed to heart attacks. An unknown number of animals died in the blaze, but park rangers believe that most outran the fire and found safety in ponds and lakes.

Once the fire was over, it was time to start anew. Two crews, one hired by the park and one hired by the Rockefeller family, logged selected park areas for timber salvage and clean-up. Some timber was milled, slash was burned, and other logs, still visible today, were left to prevent soil erosion.

Nature, however, played the predominant role in the island's restoration. The forests that exist today re-grew naturally. Wind carried seeds back into burned areas and some deciduous trees regenerated by stump sprouts or suckers. Today's forest, however, is often different than what grew before the fire. Spruce and fir that reigned before the fire have given way to sun-loving trees, such as birch and aspen. But these deciduous trees are short-lived. As they grow and begin to shade out the forest floor, they provide a nursery for the shade-loving spruce and fir which may eventually reclaim the territory.

Fire has an important natural role. It clears away mature growth, opening areas to the sun-loving species that are food for wildlife. The fire of 1947 increased diversity in the composition and age structure of the park's forests. It even enhanced the scenery. Today, instead of one uniform evergreen forest, we are treated to a brilliant mix of red, yellow, and orange supplied by the new diverse deciduous forests.

Bar Harbor, too, was changed by the fire. Most of the permanent residents rebuilt their homes, but many of the grand summer cottages were not replaced. In fact, many of the seasonal families never returned. The estates on Millionaires' Row have been replaced by motels that house the ever-increasing tourist population. But the fire alone cannot be blamed for ending the island's once-grand "cottage era." The opulent lifestyle had already been suffering from the effects of the newly invented income tax and the Depression. The destructive flames merely provided a final blow. The fire on Mount Desert Island was publicized in headlines in newspapers around the world because the island was a renowned summer retreat for the wealthy. But actually, the fall of 1947 was a dry one throughout the state, and many serious fires occurred. State-wide, over 200,000 acres, 851 permanent homes, and 397 seasonal cottages were destroyed in "the year Maine burned."

See also fire management fact sheet, page 3-91.



Fact Sheet – Portrait of Three 19th Century Families

When history is recorded it is frequently the unusual or the remarkable individual that is remembered. Those who have made new discoveries or accomplished great feats are deemed the most noteworthy. But this leads to an incomplete picture, for far more people live their lives in happy obscurity than ever make it into a volume of “Who’s Who in America.” To fully understand history we must know the story of the ordinary citizen as well as the extraordinary citizen. The following three accounts profile three ordinary families in the Mount Desert Island region during the 1800s.

THE CARROLL FAMILY

(Visit their homestead in Southwest Harbor on Route 102.)

When John and Rachel Carroll moved into their farm house in the fall of 1825 they could not have imagined that it would one day be preserved as an historic resource in Acadia National Park. A piece of land given to them by Rachel’s parents would set the stage for the building of the one and a half story Greek revival style house, built of hand hewn posts and beams on a fieldstone foundation with a cellar. The next three generations of Carrolls would all call the “Mountain House” home. John and Rachel would have six children, five daughters and one son.

The homestead became a subsistence farm common to the coast of Maine in the 19th century. Its purpose was to provide for the needs of the family. There was a kitchen garden behind the house, but most of the property was left in wood lots. Agricultural production for commercial sale and use was never a goal. Farms like the Carrolls were self-sufficient, although with never-ending chores. They could provide food, clothing, and shelter for their owners. It was, however, a cash-poor economy. To make money needed to buy things that were not grown locally such as coffee, sugar, and spices, many Mainers turned to the sea, spending some months of the year fishing or in the shipping trade. John Carroll turned to the trade he had learned as a boy back in Ireland: masonry.

John Carroll died in 1867 at the age of 77. Rachel continued to live at the Mountain House until her death in 1881 at the age of 90. She had lived in the house for 56 years, longer than anyone else ever would. After his father’s death, Jacob Carroll, John’s only son, inherited the property. Jacob did not move into the Mountain House right away, however. He had been a sailor since the age of fourteen and had spent most of his life at sea. The only one of the Carroll men to pursue a career at sea, Jacob crossed the Atlantic five times and sailed around the world once. In his more than 25 years at sea, Jacob would visit many exotic and far away ports including Rio de Janeiro, Calcutta, Peru, Constantinople, Bombay, London, Amsterdam, and Paris.

Finally, at the age of 40, Jacob returned to Mount Desert Island and married Rebecca Whitmore Lurvey. Married, with property and family to tend to, Captain Carroll made shorter voyages to sea, instead primarily engaging in the coasting trade by owning shares of numerous ships. Jacob was very successful in this trade and his family's standard of living rose considerably during this time period. An important consideration, since there were now eight daughters and two sons in the family.

Rebecca's chores at home were probably easier than those her mother-in-law had known. An advantage of Jacob's profession was that he often brought both gifts and necessities home with him. The availability of factory-made and imported goods was an advantage appreciated by many island and coastal residents of Maine. The Carroll children, although not required by law to attend school walked to nearby Norwood Cove for classes. Schooling was for young children and for older children only when it did not interfere with work. Many children only attended school eight or nine weeks each year.

Toward the close of the 19th century, the rippling effects of industrialization were beginning to be felt. As the economy changed, the need for cash increased. When Jacob retired from sailing he began a second career working as a brick mason, frequently traveling to other parts of Mount Desert Island where the influx of visitors with their needs for hotel and cottages kept him in numerous jobs. Some of his daughters who were not married also worked. One daughter, Kate, moved to Medway, Massachusetts, to work in a straw hat factory. Some like Mary Ann Carroll, who never married, was a life-long teacher. (Look for her photo at the Islesford Historical Museum).

Jacob Carroll died in 1899 at the age of 69. His wife Rebecca left the homestead and moved to Southwest Harbor. John (II) Carroll and his wife Viola and their two small children moved into the Mountain House in 1900. They would raise six children.

Like his ancestors, John depended on the masonry trade for cash. Considering the incredible level of development on the island at the time, job security was not a concern. Most of the family's food continued to be grown on the farm. John especially loved his apple trees, which are still scattered about the homestead today. The children took advantage of the combination of the natural bounty of food and summertime visitors by selling extra produce and fresh-picked blueberries.

As cash flow increased, lifestyles changed. For the first time the Carroll family owned a horse and carriage. Prior to that time they walked, or rowed, everywhere. With fewer chores to do the Carroll children were able to attend school regularly.

All of John and Viola's children graduated from high school. The family life was becoming more centered on social and business activities centered in Southwest Harbor, and although life at the Mountain House was good, it was becoming inconvenient. In 1917 the family moved to Southwest Harbor, ending four generations of Carrolls who called the Mountain House home. The house would be used in the summer, and later rented to summer visitors. In 1982 it was donated to Acadia National Park.

THE HADLOCKS

(Memorabilia from the Hadlocks can be found at the Islesford Historical Museum.)

Two of the busiest and most productive fishing communities in Maine were off the Mount Desert Island Coast—the Cranberry Isles and Southwest Harbor (on Mount Desert Island). A common sight was fishing boats headed for Labrador or the Grand Banks, or ships returning from Europe or the West Indies. At one time 85 ships called these harbors their home port. As Ted Spurling, a descendent of one of the Cranberry Isles sea captains noted:

“Usually, they went down to the West Indies... They'd take salt fish down there or maybe potatoes, or sometimes (in later years) they would take an ice cargo. They'd go to the tropics. They'd take ice and granite... They'd take popple stones off the beaches and a lot of these cobble stone roads in Boston, like that are made—they call them popple stones. And there were all kinds of different cargo they'd get from the land... but an awful lot of it was salt fish.”

The ledgers and logs found in the Hadlock Ship's Store certainly account for this trade with entries regarding molasses, rum, and sugar being quite common. The Hadlock family represents a maritime family, with a Civil War captain and an overseas adventurer thrown in for good measure.

With profits from an oversea voyage, the first Hadlock store was built in the early 1800s. The operation was later enlarged in 1850 by adding the current building standing on the island's waterfront. From a ship's store housing a sail loft and carrying maritime goods and then to a general store, the structure's use changed as times changed.

Samuel Hadlock VI (1770-1854), moved to Little Cranberry Island in 1791, where he acquired a large part of the island property and was instrumental in establishing the waterfront settlement now called Islesford. In 1808 Samuel Hadlock VI, using the proceeds from a fishing expedition, built a ships store, one of the first commercial waterfront buildings in Islesford. By 1850, his son Edwin had built another ship's store, the building now known as the Blue Duck.

Hadlock built many vessels, some of which were commanded by his sons. All but one of his five sons died or were lost at sea. His oldest son, Samuel, master of the ill-fated *Minerva*, was lost with all hands "at the ice" in 1829. Elijah, master of the brig Beaver, died on board of yellow fever the year before. Epps, master of the schooner Otter, and his brother Gilbert, were lost with all hands in the West Indies in 1831.

In 1848, several years before Samuel Hadlock VI died, the schooner *Samuel Hadlock*, was built on Little Cranberry Island. The largest vessel constructed in the Mount Desert region, this vessel was commanded by Edwin Hadlock, Samuel Hadlock's only surviving son. Edwin barely escaped a similar fate on a voyage from Tampico, Mexico, to New York in the spring of 1849, which took almost two months. Baffled by head winds and heavy seas, with men growing weaker and weaker and with hope almost gone, Edwin could record in the log, "Still a head wind and heavy seas. On allowance of one quart of water and one pound of bread per man. And so ends the twenty four hours on allowance and no tobacco. Providence doeth what seemed right in His sight."

THE GILLEYS

(Baker Island accessible only by boat)

About the year 1806, William Gilley and Hannah Lurvey Gilley moved with their three small children from Norwood's Cove (Southwest Harbor) on Mount Desert Island to Baker Island. Before the move, Gilley had fished, worked on coastal vessels, cut wood, and farmed. The move to Baker was a calculated risk, difficult perhaps in the isolation they might face, but not in the hard work that would lay ahead. No transaction of money occurred for the island; they just simply lay claim to it. On this beautiful island, with a spectacular view to the north of the whole Mount Desert Island mountain range, where all around lay the glistening sea, at times calm and reflective of sun and sky; at other times gray and frothy and wild, the Gilleys would raise six sons and six daughters

After 10 years and much hard labor, the Gilleys had changed a part of a rocky, wooded island into a reasonable farm with six cows, a yoke of oxen, two or three young cattle, about 50 sheep, and three or four hogs. Surrounded by the sea, food was abundant. Lobster could be picked from shallow pools along the rocky shore. Fish were caught most of the year. Seabird eggs were collected and eaten. The livestock raised and vegetables grown all added to their well-rounded diet. Clothing came from the wool of their own sheep wove into cloth by Hannah and the girls and then sewn into garments. Bare feet were the rule most of the year, with shoes used only during the coldest of months.

Cash, still needed for purchasing essentials they could not raise or make on their own, came through selling feathers of seabirds, eggs, and butter in Southwest Harbor. In 1828, William Gilley's appointment as a lighthouse keeper at Baker Island in 1828 offered a new occupation. Hannah, who was raised in Massachusetts was fairly educated and made sure that her children learned to read and write. Nearly every Sunday in the summer Hannah took the eldest children 14 miles round-trip, in an open boat, to the Congregational Church at Southwest Harbor.

The twelve children raised by the Gilleys all lived to maturity, and Hannah and William would have 58 grandchildren. A small graveyard on the island is the final resting place of some of their descendents.

Under Acadia's care, the stories of these families are preserved as an example of a bygone way of life. Park visitors with boat access to Baker Island can step back in time and encounter a piece of the history of coastal Maine in the 19th century.



SECTION FOUR — RECREATION

Chapter Twenty – Recreational Activities at Acadia

- Hiking
- Biking
- Boat Excursions
- Camping
- Fishing
- Rock Climbing

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Hiking
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Recreation Fact Sheet – Hiking

This trail list divides Acadia's hiking trails according to their general location. It includes brief trail descriptions, NPS ratings, trailhead starting points, one-way distances (unless otherwise noted), and time estimates for the one-way distance (unless otherwise noted) based on an average hiker with resting stops. Trailheads that begin off of a connecting trail only have the mileage listed for the specific trail, not the connecting trail. Hikers should note this and add the distances for each trail for a more accurate idea of the time and distance involved.

This information does not take the place of a detailed map and/or guide; therefore the park strongly encourages the purchase of one or both of these items. A word of caution—some trail guides may show historic names for the hiking trails that vary from those used by the National Park Service.

HIKING GUIDELINES

- Carry detailed hiking map and, if desired, hiking guide book.
- Always estimate a little extra hiking time.
- Wear proper gear for terrain and weather.
- Bring adequate water.
- *Leave no trace*—pack it in, pack it out.
- Follow trail blazes (blue paint) and rock cairns (rock piles on open rock).
- Stay on established trails, especially on mountain summits, to avoid trampling fragile plants and creating “social” trails.
- Some trails may be closed due to conditions. Check before hiking.

TRAIL RATINGS

- **E**—Easy/Generally over level ground but may include some minor rises. May be over rocky ground.
- **M**—Moderate/Includes gradual inclines with uneven footing.
- **S**—Strenuous/Steep, rocky, difficult inclines.
- **L**—Ladder/In addition to being strenuous includes iron rungs or ladders to traverse narrow ledges or cliff faces.

1. FROM BAR HARBOR

Bar Island (E): A window of 1-1/2 hours on either side of low tide allows passage along the bar connecting this island to Bar Harbor. Meadows and woodlands are crossed by trails. *Trailhead: Bridge Street off West Street in Bar Harbor 1/2 mile/ 30 minutes.*

Great Meadow Trail (E): Following in the footsteps of those that gave land to create Acadia, generous private landowners have allowed visitors walking access to Acadia's Great Meadow from Bar Harbor. Please respect their privacy. Trail map is displayed on the village green.

2. PARK LOOP ROAD – VISITOR CENTER TO SIEUR DE MONTS SPRING

Trailheads along the Park Loop Road are given in order of location with mileage measured from the visitor center.

Cadillac North Ridge Trail (M): Open ledges and views toward Bar Harbor characterize this trail that primarily follows the road bed to Cadillac's summit. *Trailhead: 3.2 miles from the start of the loop road/ 2.2 miles/90 minutes.*

Dorr Mountain North Ridge Trail (M): Steep, open ledges with views towards Bar Harbor and Cadillac Mountain's east side. *Trailhead: 4.1 miles from start of the loop road/1.8 miles/90 minutes.*

Gorge Path (M): Traverses a rocky streambed enclosed by mountain walls through the saddle between Dorr and Cadillac. Trail turns westward at notch between Cadillac and Dorr and climbs to Cadillac Mountain summit. *Trailhead: 3.8 miles from start of the loop road/1.8 miles/90 minutes.*

Kebo Mountain Trail (M): Includes trail sections from the Gorge Path and Dorr Mountain North Ridge Trail joined by a connector trail. Kebo Mountain rises 407 feet and offers some views of Great Meadow. *Trailhead: same as either the Gorge Path or Dorr Mountain North Ridge Trail/ 1.5 miles/60 minutes.*

3. SIEUR DE MONTS SPRING AREA

Dorr Mountain hiking trails and their connections to Cadillac Mountain and other areas of the park are primarily accessed from Sieur de Monts Spring. In general, trails following the east face of Dorr Mountain are more challenging than those on the southern and northern slopes. Check trail guides and maps for specific directions.

Dorr Mountain East Face Trails - Trailheads behind Spring House on Jesup Trail:

Dorr Mountain East Face Trail (S): Access to the East Face Trail of Dorr Mountain is via trails built with granite steps. The trail is open with immediate and satisfying views. *1.5 miles/75 minutes.*

Kurt Diederich Trail (S): This trail is more wooded than the Dorr Mountain East Face trail. The two trails converge and continue a steady climb over open granite ledges toward Dorr's summit. *1.5 miles/75 minutes.*

Ladder Trail (L): This very strenuous climb includes three iron rung ladders and numerous granite steps. Trailhead can also be accessed from Tarn parking lot on State Route 3. Connects with the Dorr East Face Trail to complete the hike to Dorr Mountain summit. *.6 mile/50 minutes.*

Tarn Trail (M): Rolls through meadows, past beaver ponds, and through woods along Otter Creek. Trailhead can also be accessed from Tarn parking lot on State Route 3. Provides connections with the Ladder Trail and Canon Brook. *1.2 miles/35 minutes.*

Trailheads From behind Nature Center:

Jesup Path (E): Following in the footsteps of Native Americans through birch forests and open marsh. Today's trail, over boardwalks and small foot bridges, connects to the Tarn Trail to the east and the Park Loop Road to the west. *.6 miles/20 minutes.*

Dorr Mountain North Slope Trails–Trailheads from the Hemlock Road (Behind Wild Gardens):

Dorr Mountain North Ridge Trail (M): Steep, open ledges with views towards Bar Harbor and Cadillac Mountain's east side. *Trailhead: From Hemlock Trail/1.9 miles/85 minutes.*

Gorge Path (M): Traverses a rocky streambed enclosed by mountain walls through the saddle between Dorr and Cadillac. Trail turns westward at notch between Cadillac and Dorr and climbs to Cadillac Mountain summit, or east toward Dorr Mountain. *Trailhead: from Hemlock Trail/1.9 miles/85 minutes.*

Hemlock Trail (M): After a short steep ascent through a small hemlock grove, the trail levels and connects with Dorr North Ridge Trail, Gorge Path, and Kebo Mountain. *.5 miles/20 minutes.*

Strath Eden Path (E): This path gradually rises through birch and aspen forests before ending at the Park Loop Road. Also connects with Dorr North Ridge Trail. *Trailhead: From Hemlock Trail/.9 miles/25 minutes.*

Dorr Mountain South Slope Trails–Trailheads and connections off of Route 3 approx. 1/4 mile past the Tarn Parking Area (a short path leads to the Tarn Trail):

A. Murray Young Trail (M): Stream-lined woods and open grassy areas characterize this trail that rises through the south-facing valley between Dorr and Cadillac. *Trailhead: from Canon Brook Trailhead/1.9 miles/60 minutes.*

Canon Brook Trail (S): Connects with the Dorr Mountain South Ridge Trail and the A. Murray Young Trail before steeply rising to intersect with the South Ridge Trail of Cadillac. Canon Brook continues on to meet with the Pond Trail for access to Jordan Pond. *Trailhead: .5 mile from Ladder Trail trailhead (just south of the Tarn)/2 miles/85 minutes.*

Dorr South Ridge Trail (M): Coniferous woods and open granite ledges with views of Cadillac, Champlain, and the ocean. *Trailhead: from Canon Brook Trailhead/1.9 miles/85 minutes.*

Trailheads From Tarn Parking area on Route 3, 1/10 mile from Sieur de Monts entrance:

Beachcroft Trail (M): Across from the Tarn and Route 3, a series of stone steps and switchbacks along open ledges rise to just below Huguenot Head's summit. The trail drops into a small valley and continues on to Champlain Mountain's summit. *.8 mile/55 minutes.*

Tarn Trail (E): See Dorr East Face Trails on page 4-4.

4. FROM SIEUR DE MONTS SPRING TO SAND BEACH

Park Loop Road Trailheads (in order of location on Park Loop Road):

Bear Brook (M): This gradual climb leads to the summit of Champlain Mountain along its north ridge. *Trailhead: 6.4 mile from visitor center on the Park Loop Road/1 mile/55 minutes.*

Precipice (L): One of the most challenging trails in the park, the Precipice is a ropeless, non-technical climb over steep exposed rock with sheer drops using ladders, iron rungs, and steel bridges across ravines. NOTE: Hikers with hesitancy about heights should carefully consider taking this route. The thousand foot cliff face is also home to nesting peregrine falcons. To prevent disturbance to these raptors, the trail is often closed in the spring until mid-summer. *Trailhead: 7.3 mile from visitor center on the Park Loop Road/.9 mile/65 minutes.*

5. SAND BEACH AREA

Beehive (L): For those wanting an exhilarating climb, the Beehive's iron rungs and sheer drop ledges provide just that. NOTE: Hikers with hesitancy about heights should carefully consider taking this route. From the top of the Beehive, continue on toward the Bowl. *Trailhead: Off Park Loop Road across from Sand Beach Parking Area/.8 mile/40 minutes.*

Champlain South Ridge Trail (M) leads to spectacular ocean views. From Champlain's summit, return via the same route, or down Bear Brook or head to the west and the Beachcroft Trail (see Sieur de Mont Spring section). *Trailhead: from Bowl Trail.*

Great Head Trail (M) rambles up and around a rocky peninsula and through a birch forest. Starting point is at the eastern end of Sand Beach. *Trailhead: East end of Sand Beach/Roundtrip: 1.7 miles/60 minutes.*

Ocean Trail (E) parallels the Park Loop Road as it passes Thunder Hole, winds around Otter Cliffs, and ends at Otter Point. The second half of the two-mile trail is more secluded from the road. *Trailhead: Upper parking lot at Sand Beach/2 miles/55 minutes.*

The Bowl Trail (M) is a gradual climb between the steep-sided Beehive and Gorham Mountain to this small glacial pond. *Trailhead: Off Park Loop Road across from Sand Beach Parking Area/.7 mile/30 minutes.*

6. FROM SAND BEACH TO JORDAN POND

Park Loop Road Trailheads in order of location on the Park Loop Road:

Gorham Mountain Trail (M): Gorham Mountain rises gradually to 525 feet, offering ocean views from its summit before dropping into its shared valley with the Beehive. Cadillac Cliffs, a short spur trail just after the start of the Gorham Mountain Trail, passes through a wooded area along rock walls, once the island's shoreline following the release of glacial ice 12,500 years ago. *Trailhead: 9.7 miles from visitor center on Park Loop Road/1 mile/45 minutes.*

Hunters Brook Trail (M) is primarily through dense woods before joining with the Bubble Pond carriage road and the Pond Trail further north along the carriage road. *Trailhead: 14.1 miles from visitor center on Park Loop Road/2 miles/60 minutes.*

7. JORDAN POND AREA

Trailheads from behind Jordan Pond Giftshop at Carriage Road junction # 15:

Asticou Trail (M) is a rolling woods walk with a few gentle climbs. The trail connects to Sargent Mountain South Ridge Trail, carriage road to Brown Mountain, or to Eliot Mountain and Thuya Gardens in Northeast Harbor. *1.8 miles/60 minutes.*

Jordan Stream Trail's (M) character changes with the personality of the stream that, dependent on the season, ranges from quiet pools to rushing water. The Cobblestone Bridge at trail's end seems to be a natural extension of the stream itself. Built in 1917, it is the only carriage road bridge faced with cobblestones. Return trip along carriage road. *.6 miles/20 minutes.*

Jordan Cliff Trail's (L) very steep rises and drops characterize this rugged hike over ledges and rocky breakdown. Metal rungs, railings, and bridges assist hikers. May be closed at times in the spring and early summer due to peregrine falcons nesting. *2.2 miles/90 minutes.*

Penobscot Mountain Trail's (S) initial steep climb levels to a gradual rise to Penobscot's summit, and continues to small Sargent Pond and on to Sargent Mountain, the park's second highest summit. *1.5 miles/70 minutes.*

Carriage Roads (E): Numerous carriage roads wind to the south of the Jordan Pond Tea House, to the north to Eagle Lake, to the west toward Brown Mountain Gatelodge, and to the east toward Wildwood Stables. Carriage road explorers can seek out three stone-faced bridges in the vicinity of the Jordan Pond Tea House: the Cobblestone Bridge along Jordan Stream (see below), the Jordan Pond Bridge, and the West Branch Bridge (on carriage road leading toward Brown Mountain). Be sure to pick up a Carriage Road Users Map from park information centers. (Copy in this guide.)

Trailheads From Jordan Pond Boat Ramp:

Jordan Pond Self-Guiding Nature Trail: This 1/2-mile natural history walk loops along the edge of Jordan Pond and through the woods. Brochure available at trailhead for nominal fee. *Trailhead: Beginning of boat ramp next to parking lot/ 1 mile/35 minutes.*

Jordan Pond Trail's (M) three mile loop includes level walking and some challenging terrain over large boulders on the west side of the pond. *Roundtrip: 3.2 miles/1 hour, 40 minutes.*

The Pond Trail's (S) beginning mile (from the Jordan Pond Trail) is a gradual rise through open spruce woods past trailheads for Pemetic Mountain and the Triad. After it intersects with the Bubble Pond carriage road, The Pond Trail's character changes abruptly with steep climbs as it rises toward Cadillac's South Ridge Trail and joins with Canon Brook. *1.5 miles/65 minutes.*

The Triad (M) is a grouping of three small peaks to the south of Pemetic Mountain. The trail around the three peaks is a loop. *Trailhead: from The Pond Trail/3 miles/120 minutes.*

8. BUBBLE ROCK/BUBBLE POND AREA

Bubble-Pemetic Trail (S) is a steady climb through dense forests with few views. *Trailhead: Across from Bubble Rock Parking/.5 mile/40 minutes.*

Cadillac West Face Trail (S) steeply climbs up Cadillac Mountain's western slope from the eastern shore of Bubble Pond to connect with other Cadillac Mountain trails. *Trailhead: East side of Bubble Pond/1.4 miles/85 minutes.*

Carry Trail (M) meanders through woodlands to meet the Bubble trails.

Trailhead: Across Park Loop Road from Bubble Pond on carriage road/1 mile/30 minutes.

Connors Nubble (M) rises 588 feet above Eagle Lake and offers stunning views of Eagle Lake to the north and the Bubbles to the south. *Trailhead: 1.3 mile from the Eagle Lake Trailhead or 1 mile from the carriage road junction #7/.6 mile/30 minutes.*

Eagle Lake Trail (M) follows the southwest shore of Eagle Lake terminating at Eagle Lake carriage road's west side. *Trailhead: from carriage road junction #7/1.3 miles/45 minutes.*

North Bubble (M) forks to the right from the Bubble Rock Trail and leads to the steeper North Bubble with views of Eagle Lake and Frenchman Bay. *Trailhead: From Bubble Rock Parking/.6 mile/30 minutes.*

Pemetic Mountain Trail (S) is wooded with open areas toward the summit. Spectacular ocean views appear before dropping toward the Pond Trail along the Pemetic South Ridge Trail. *Trailhead: Bubble Pond parking/1.3 miles/65 minutes.*

South Bubble/Bubble Rock (M): A quick ascent up South Bubble leads to the huge balanced glacial erratic, Bubble Rock. *Trailhead: From Bubble Rock Parking/.7 mile/30 minutes.*

9. CADILLAC MOUNTAIN AREA

Cadillac West Face Trail (S) is a steep and strenuous trail that joins Bubble Pond to the South Ridge of Cadillac Trail. *Trailhead: from South Ridge of Cadillac Trail/1.4 miles/85 minutes.*

Dorr Mountain Notch Trail (M) connects Cadillac Mountain Summit with Dorr Mountain trails. *Trailhead: eastern side of the Summit Path behind the Bar Harbor Interpretive sign/.4 mile/15 minutes.*

Cadillac North Ridge Trail (M) begins in the eastern corner of the parking lot. (See description under Park Loop Road – VC to Sieur de Monts, page 4-4.)

South Ridge of Cadillac Trail (S) is one of the longest trails in the park over a gradual climb to the summit of Cadillac at 1532 feet. Other trail options from the South Ridge Trail include Canon Brook, The Pond Trail, and other Cadillac Mountain trails. *Trailhead: from Cadillac Summit is behind the giftshop; from Route 3 across from Blackwoods Campground or from within campground.*

Summit Path (E) is a 1/2-mile paved path around the summit of Cadillac Mountain offering panoramic views of the Acadian archipelago. *15 minutes.*

10. BROWN MOUNTAIN/PARKMAN MOUNTAIN

Trailheads From Maine Route 198:

Giant Slide Trail (S) is one of the most strenuous mountain trails in the park leading up Sargent Mountain. *Trailhead: 1.1 mile from the junction of Route 198 and 233 begins on private property/2.8 miles/105 minutes.*

Sargent Mountain North Ridge Trail (M) provides a more moderate climb to Sargent's summit from the Giant Slide Trail. *Trailhead: same as Giant Slide Trail/3 miles/150 minutes.*

Trailheads From Parkman Mountain Parking Lot—off State Route 198:

Parkman Mountain, Bald Peak, and Gilmore Peak Trails (M) offer open views from their rounded rocky peaks and connections to trails on Sargent Mountain. *Trailhead: Take carriage road to the right; at carriage road junction #13 turn left about .2 mile for trailhead/1 mile/50 minutes.*

Grandgent Trail (S) is a challenging trail to Sargent Mountain summit leading up Sargent Mountain's west slope. *Trailhead on Sargent Mountain summit/1 mile (to Giant Slide Trail)/35 minutes.*

Trailheads From Norumbega parking pull-off—off State Route 198:

Maple Spring Trail and Hadlock Brook Trail (S) run parallel to each other through steep wooded areas that are rocky and rough before opening toward Sargent Mountain's summit. *Trailheads: east side of Route 198; 2.7 miles from intersection with Route 233/2 miles/90 minutes.*

Norumbega Mountain Trail (S) is fairly level along the base of Norumbega, but then rises steeply to reach the summit. Norumbega's South Ridge Trail returns to Lower Hadlock Pond. *2.5 mile/90 minutes.*

Trailheads From Brown Mountain Parking Lot—off of State Route 198:

Lower Hadlock Pond Trail (M) connects trails for hikes to Upper Hadlock Pond or Norumbega Mountain. *Trailhead: across Maine Route 198 from Brown Mountain Gatehouse/1.4 mile/65 minutes.*

Sargent Mountain South Ridge Trail's (M) steady climb offers views of the valley between Sargent and Penobscot as well as some ocean views. *Trailhead: Take carriage road to the right. At carriage road junction #18, turn right. At carriage road junction #19 turn right. Trailhead is .7 miles from parking area/3.1 miles/135 minutes.*

11. ACADIA MOUNTAIN/ST. SAUVEUR/BEECH MOUNTAIN AREA

Trailheads From Acadia Mountain Parking—west side of Route 102:

Acadia Mountain's (S) steep climb and descent and east-west ridge trail offers outstanding views of Somes Sound, the island's eastern mountains, and Beech Mountain. *Trailhead: across from the parking area/2.5 miles/90 minutes.*

St. Sauveur via Ledge Trail (M) climbs through a densely shaded forest, then meets with the St. Sauveur Trail and continues on to the summit. *Trailhead: from Acadia Mountain trailhead/.8 miles/40 minutes.*

Valley Cove Trail (S) continues from the Acadia Mountain trail at the east end of the Man O'War Brook Fire Road. Sections of jumbled talus make this coast-hugging trail challenging before rising to meet the Valley Cove Fire Road. Can continue along Valley Peak Trail and St. Sauveur Trails back to Acadia Mountain parking. *Trailhead from east end of Acadia Mountain Trail at junction with Man O'War Brook Fire Road/2 miles/70 minutes.*

Trailheads From St. Sauveur Parking—east side of Route 102:

St. Sauveur Mountain Trail's (M) gradual climb through spruce forests and occasional open slopes joins the Ledge Trail before reaching the summit. Views from the summit are limited. *1.3 miles/55 minutes.*

Valley Peak Trail (S) offers limited views from its east side until approaching the ridge line along Eagle Cliff, above Valley Cove. From St. Sauveur's summit, this strenuous and steep trail skirts along precipitous Eagle Cliff and then drops to the Valley Cove Fire Road. *Trailhead: From the St. Sauveur Mountain Trail/.8 miles/45 minutes.*

Trailheads From Echo Lake:

Beech Cliff Trail (L) is a ladder trail ascending the steep-sided granite cliffs on the west side of Echo Lake. NOTE: Hikers with hesitancy about heights should carefully consider before attempting this route. Beech Cliffs Trail rises quickly through a steep ravine via a series of ladders, metal rungs, and stone steps. *Trailhead: behind ranger house in Echo Lake parking lot/.5 mile/40 minutes.*

Trailheads From Beech Mountain Parking Lot (off of Beech Mountain Road; 2/10 of a mile west of Somesville Fire House on State Route 102):

Beech Mountain (M) is a summit with an addition; a fire tower that once served as a fire lookout for points between Frenchman Bay and Blue Hill Bay. Two forks of the trail provide different views. The trail to the left quickly ascends the mountain over granite ledges. The north fork continues straight offering outstanding views of Long Pond before reaching the summit. *1.1 miles/45 minutes.*

Beech Mountain South Ridge Trail (M) follows the southern flank of Beech Mountain over open ledges and shaded woods, connecting the summit with the Valley Trail. *Trailhead: Either from Beech Mountain summit or from Long Pond Service Road/.9 mile/45 minutes.*

Beech Mountain West Ridge Trail (M) descends along the mountain's west ridge and then follows Long Pond's shoreline before ending at the Long Pond pump house. *Trailhead: From Beech Mountain summit or Long Pond Road at pump house/1mile/45 minutes.*

Canada Cliffs Trail (M) at the top of Beech Cliffs, offers views of Echo Lake and access to the Valley Trail. *Trailhead: Across from the Beech Mountain parking lot/.9 miles/45 minutes.*

Valley Trail (M) traverses area between Canada Cliffs and Beech Mountain, ending at Long Pond Road. *Trailhead: South end of Beech Mountain parking lot/1.2 mile/ 50 minutes.*

12. SEAWALL AREA

Trailheads off of Maine Route 102A:

Ship Harbor's (M) trail winds through various Acadian habitats such as spruce forests, open ledges of huckleberry and blueberry, rocky shoreline, and mud flats. Ship Harbor, according to local legend, was aptly named for a wayward 18th century British ship that chose the harbor at high tide to hide. Low tide found the boat stuck, where it stayed until its deterioration was complete. Visitors to Ship Harbor at low tide no longer see that vessel, but can enjoy a variety of shorebirds that fish and pluck meals among the mud flats. The first half of the trail is wheelchair accessible. *Trailhead: off of Route 102A, 2 miles from Seawall Campground/1.3 miles/45 minutes.*

Wonderland's (E) wide pathway leads hikers through spruce forests and open rock ledges scattered with pitch pine before arriving at a rocky shoreline and cobble beach. Rugosa roses clumped along the coast release their heavy perfume to mix with the salt air. The trail is considered wheelchair accessible although there are a few rough spots from roots and loose gravel. Assistance may be required. *Trailhead: off of Route 102A, .9 miles from Seawall Campground/1 mile/30 minutes.*

13. WESTERN MOUNTAINS

Bernard Mountain South Face Trail (S) travels through a beautiful spruce and fir forest with occasional views of Blue Hill Bay to reach Bernard Mountain's summit *Trailhead: Western Mountain Fire Road/1.7 mile/80 minutes.*

Cold Brook Trail (E) connects the southern end of Long Pond with Gilley field around the base of Mansell Mountain. *Trailhead: South end of Long Pond/.4 mile (to Gilley field)/20 minutes.*

Great Notch Trail (M) meanders through the notch between Mansell and Bernard, offering access to other trails. *Trailhead: Gilley Field/1.1 mile (to Great Notch)/45 minutes.*

Great Pond Trail (M) hugs the shoreline of Long Pond for two miles before turning abruptly and rising toward Long Pond Fire Road. *Trailhead: south end of Long Pond/4 miles one way/3-1/2 hour roundtrip.*

Perpendicular Trail (S)/Razorback Trail combine to climb over Mansell Mountain offering views of the valley between Mansell and Bernard Mountain. Both trails are appropriately named. *Trailhead: south end of Long Pond/3.7 mile loop/120 minutes.*

Sluiceway (S) runs up the eastern slope of Bernard Mountain paralleling a mountain stream, joining the South Face Trail. *Trailhead: Mill Field off of Seal Cove Road/1.1 mile/60 minutes.*



Recreation Fact Sheet – Bicycling

From Acadia's unique car-free carriage road system to the spectacular scenery of the 27-mile Park Loop Road, bicyclists have many routes to choose from. Choose your route according to your abilities, time, and members in your party. Please follow the rules of the road so everyone in your group has a safe and enjoyable trip.

RULES OF THE ROAD

- Ride on the right, pass on the left.
- Obey all traffic signs.
- On automobile roads, ride single file in the direction of traffic. Use the shoulders.
- Let hikers or bikers know you are passing.
- Yield to pedestrians and horses.
- Bike only on carriage and automobile roads, not hiking trails.
- Bring adequate water.
- Wear a helmet.
- Watch your speed and stay alert!

BICYCLE RENTALS

Bar Harbor, Northeast Harbor, and Southwest Harbor have bicycle rentals. In Bar Harbor, many bicycle rental companies send visitors 8/10 of a mile up the West Street extension to the Duck Brook Road to access the carriage roads at Duck Brook. From Duck Brook Bridge, visitors can travel Eagle Lake, Witch Hole Pond, and/or Paradise Hill carriage roads. The West Street extension is fairly steep.

PARK LOOP ROAD

If visiting in the summer months, consider biking the Park Loop Road in the early morning or late afternoon. Although there are no mountain climbs on the loop itself, there are steady heart-pounding rises. Cyclists on the Park Loop Road must follow the one-way direction from the start of the loop to Jordan Pond. Be aware that cars may park in the right hand lane.

Two-way traffic is between Jordan Pond and the visitor center. The road between Cadillac Mountain and Jordan Pond is narrow without an adequate shoulder and not recommended for bicycling.

CADILLAC MOUNTAIN

People enjoy cycling up Cadillac Mountain in part for the trip back down. The 3.5 mile road has an 8% grade. Traffic is heavy, and in many areas the shoulders are gutters for handling rain run-off.

CARRIAGE ROADS

For carriage road biking, be sure to have a copy of the Carriage Road Users Map (in this guide) or a carriage road guide book from park information centers. Carriage road intersection numbers on signs correspond to these sources.

Although the Jordan Pond area provides good access to the carriage road system, many of the carriage roads to the south of Jordan Pond are on private property and off-limits to cyclists (but not horses or walkers). Check carriage road guides for specific closure areas. The suggested routes here are for bikers and ambitious walkers, but anyone can travel a short distance on the roads to experience their flavor.

From Visitor Center

Witch Hole Pond/Paradise Hill's six mile route travels past marshes, through woods, and offers occasional ocean views. A short but steep access trail leads from Hulls Cove Visitor Center parking lot.

From Eagle Lake—on State Route 233; 3 miles west of Bar Harbor

Witch Hole Pond/Paradise Hill: See above.

Eagle Lake's six-mile loop is fairly level on the east side with steady rises on the southern and western side. Other options from this loop include traveling to Bubble Pond and Jordan Pond.

Aunt Betty Pond Loop quickly climbs to the west of Eagle Lake, offering mountain views before descending past Aunt Betty Pond, meadows, and marshes. The road climbs again before rejoining the Eagle Lake carriage road. Other options include traveling to Brown Mountain or Jordan Pond.

Bubble Pond Area—from Park Loop Road

Bubble Pond to Jordan Pond: The Bubble Pond carriage road ambles along the eastern shores of Bubble Pond around the base of Pemetic Mountain. After passing by Wildwood Stables and the Day Mountain carriage road, the carriage road continues to Jordan Pond.

Eagle Lake: After crossing the Park Loop Road to the west, the carriage road circles Eagle Lake, or connects with the carriage road that parallels Jordan Pond's western shore.

Jordan Pond Area—from Park Loop Road

Around Mountain circles the bases of Penobscot, Sargent, and Parkman Mountains in this strenuous 11-mile loop. Also accessed from Eagle Lake, Parkman Mountain, or Brown Mountain Parking Area.

Jordan Pond to Bubble Pond: See Bubble Pond area.

Jordan Pond to Amphitheatre: See Brown Mountain Area.

Jordan Pond to Eagle Lake rises above Jordan Pond passing between the Bubbles and Sargent Mountain before descending toward Eagle Lake.

Parkman Mountain—from State Route 198

Hadlock Brook (Parkman Mountain): This four mile loop is a good choice for walkers and cyclists alike. Primarily wooded until rising around the base of Parkman Mountain and Bald Peak, the road offers views across Hadlock Pond out to sea, and crosses three carriage road bridges: Hadlock Brook, the Waterfall Bridge, and the Hemlock Bridge.

Around Mountain Loop: See Jordan Pond.

Brown Mountain—from State Route 198

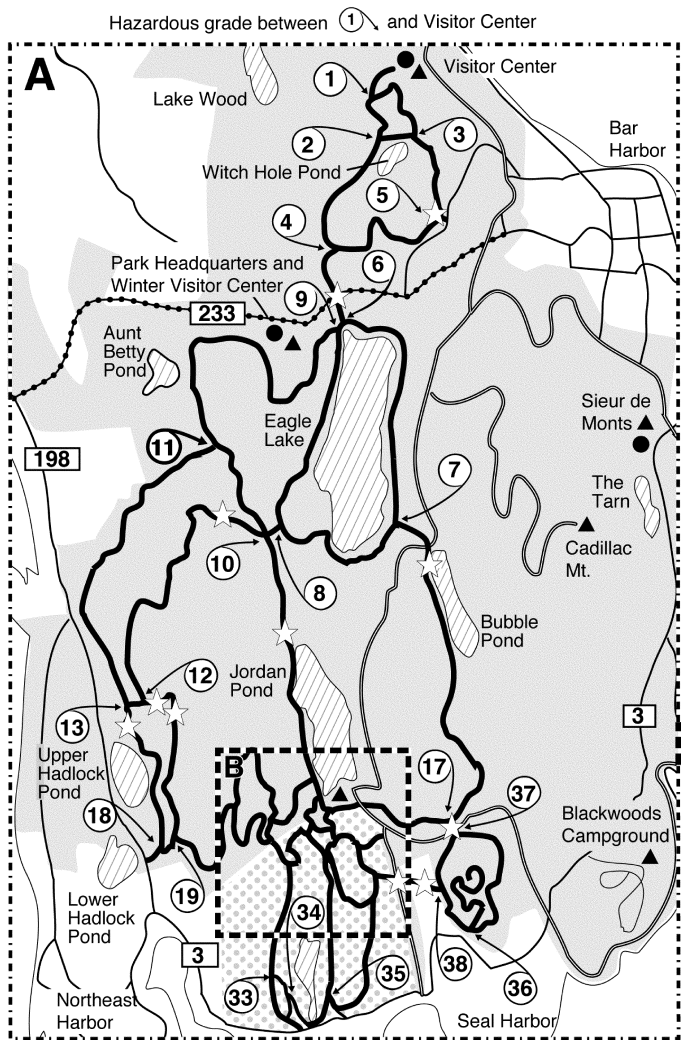
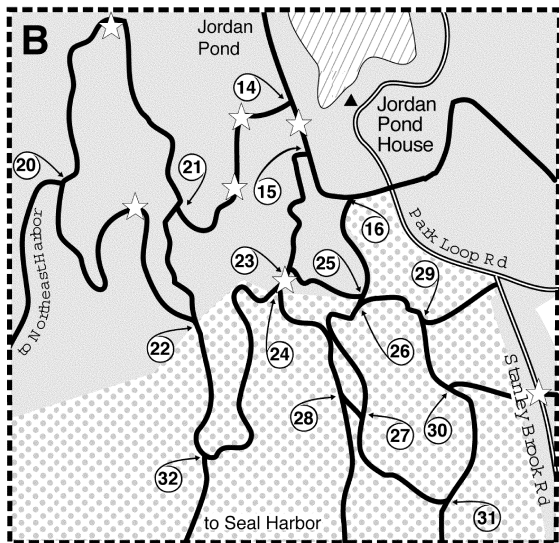
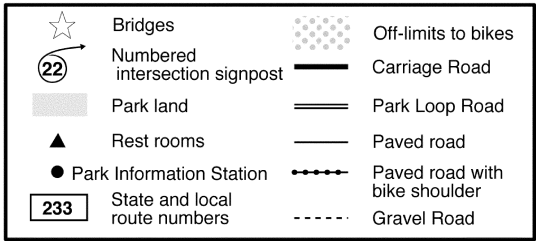
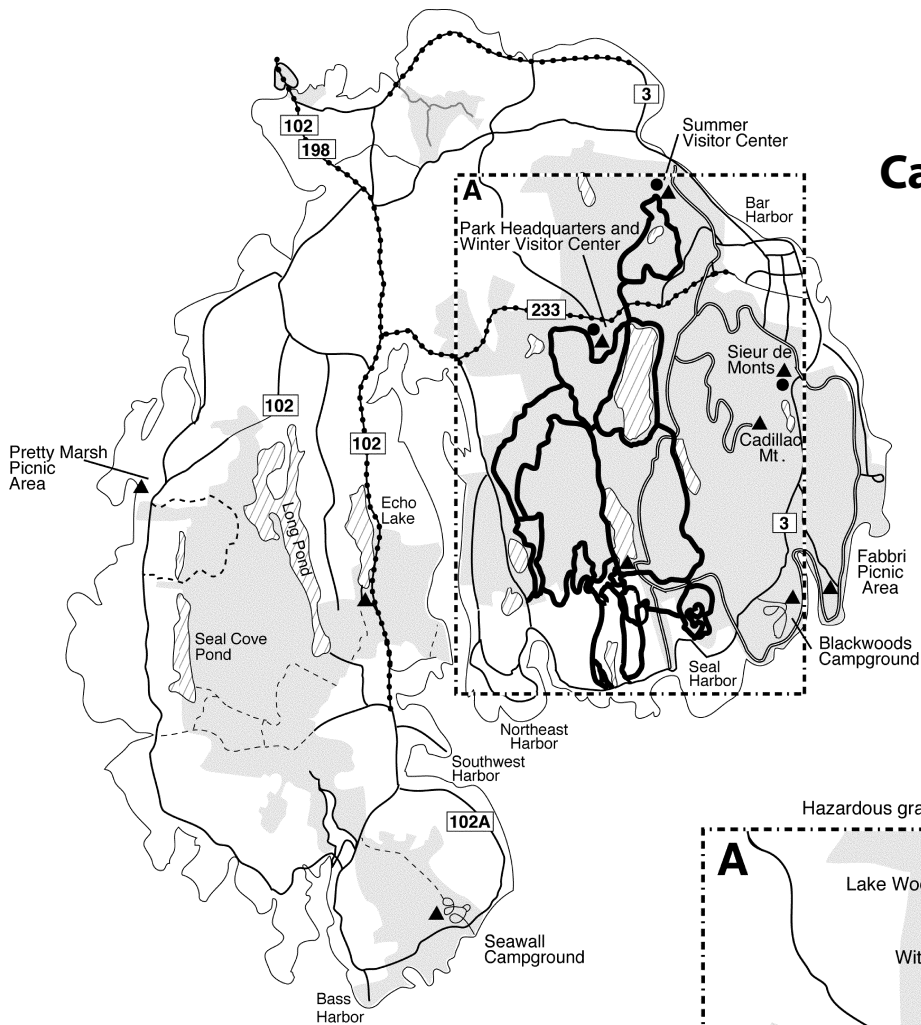
Hadlock Brook: See above.

The Amphitheatre loop lies to the east of Brown Mountain in a valley between Sargent and Penobscot Mountains. The loop's two carriage road bridges are in direct contrast to each other. The 236-foot-long Amphitheatre bridge, reached after a steady uphill climb, dwarfs the Little Harbor Brook Bridge. Another option is to continue on to Jordan Pond from the Amphitheatre, passing over the Cliffside Bridge and the West Branch Bridge.

Western Side of Acadia

In addition to cycling on the state highways, there are two gravel roads in the park for cyclists. The **Seal Cove Road** connects Southwest Harbor to Seal Cove over a four-mile road. Although cars are not prohibited from this road, it is not heavily traveled, except for commuter traffic. The **Hio Road** connects Seawall Campground with Highway 102 at Bass Harbor Marsh. The 2.5-mile level gravel road runs through a wooded, marshy area. It begins in the group camping area at Loop C.

Carriage Roads





Recreation Fact Sheet – Boat Excursions

BAR HARBOR

From the pier on West Street, numerous boating companies operate boat trips from whale watching to nature cruises to schooner jaunts.

NORTHEAST HARBOR

Numerous boat cruises are available from the town pier, including those that visit two of Acadia's off-shore holdings, Baker Island and the Islesford Historical Museum.

Outer Islands: The Town of the Five Islands (Bear, Sutton, Baker, Little Cranberry, and Great Cranberry) lie just outside of Northeast Harbor's mouth. Visitors wishing to glimpse island life can take the mailboat and explore both Great and Little Cranberry Island or enjoy an excursion on a tour boat.

Beal and Bunker, Inc.: Year round mailboat service to the outer islands. 244-3575.

Baker Island: Mostly all national park land, historical Baker Island is accessible via private boat. The island has panoramic views of Mount Desert Island and a magnificent granite block beach.

Islesford Historical Museum: On Little Cranberry Island, this small brick structure, part of Acadia National Park, exhibits stories of past island residents and their ties to maritime history. For more information, contact the park at 288-3338.

SOUTHWEST HARBOR/BASS HARBOR

Both Bass Harbor and Southwest Harbor offer tourist boating excursions in addition to the following ferry operations.

Cranberry Cove Boating: Seasonal boat service to Cranberry Isles from Southwest Harbor town pier, off Clark Point Road. 244-5882; 460-1981.

Swans Island Ferry: Six-mile, 30-minute trip from Bass Harbor. Reservations required for car transport. 624-7777.

BOAT EXCURSIONS – CANOES AND KAYAKS

There are numerous outfitters in each of the island towns that offer rentals and guided trips. Check local newspapers or the yellow pages for specific phone numbers.



Recreation Fact Sheet – Camping

FACILITIES

There are two campgrounds in the park. All sites are wooded and within a 10 minute walk of the ocean. The majority of sites are for tents, small and large, but other sites accommodate pop-ups, vehicle campers, and RV's up to 35 feet. A maximum of one vehicle and six people is allowed at each site. There are no hook-ups.

Campground facilities include comfort stations, cold running water, dump station, picnic tables, fire rings, and water faucets. Showers and camping supply stores are within 1/2 mile of both campgrounds.

Private campgrounds are available on the island. Contact local chamber of commerce for listings.

GROUP SITES

Group campsites are available at both Seawall and Blackwoods. There are five group sites holding 15 each which can be reserved through the park at 288-8791.

Fee: \$50.00/night.

SPECIFIC CAMPGROUND LOCATIONS AND INFORMATION

Blackwoods Campground: Located on Route 3 five miles south of Bar Harbor. Open year round. Reservations are suggested from May 1–October 31 and are handled through the National Park Reservation System at 800-365-2267. From November through May, Blackwoods is first come, first served. Facilities may be limited.

Fee: \$20.00/night.

Seawall Campground: Located on Route 102A four miles south of Southwest Harbor. Open from late May to late September. First come-first served—no reservations. In late July and August there is a great demand for campsites and lines form early each morning. *Fee: \$20.00/night for drive-in site; \$14.00/night for walk-in site.*

REGULATIONS

Pets must be leashed and attend at all times. Camp in established campgrounds only. Overnight backpacking is prohibited. Acadia is a small national park with a large visitation. Limiting backpackers to a reasonable level to assure minimal damage to resources is not a feasible option.

Length of stay is limited to 14 days. Quiet hours extend from 10pm to 6am. Both campgrounds are closed to persons other than registered campers from 10pm to 8am. Food must be stored in a rigid latching container, vehicle, or in such a manner as to be inaccessible to raccoons, squirrels or other foraging animals.

ISLE AU HAUT

A special use permit is required for use of the camping shelters at Duck Harbor on Isle au Haut. Maximum stay is 5 days from opening through June 15, and from September 15 through closing. From June 16 through September 14 the maximum stay is 3 days. Isle au Haut camping party size is limited to 6 persons per site. Dogs are not allowed in the campground.



Recreation Fact Sheet – Fishing

During July and August, trout and salmon are found deep in the cooler waters of lakes and ponds on Mount Desert Island. Special fishing gear often leads to greater success in catching cold water species in the summer. In the cooler seasons, trout and salmon can be readily caught using common methods. Warm water species can be caught in several lakes and ponds throughout the year using common methods.

FRESHWATER FISHING

You may purchase a freshwater fishing license locally in town offices. Maine residents 16 years or older and non-residents 12 years or older need a license.

To obtain non-resident license:

- Paradis True Value Hardware
31 Holland Avenue, Bar Harbor, 288-4995
- Northeast Harbor Municipal Building, 276-5531
- Southwest Harbor Municipal Building, 244-5404

To obtain resident license:

- Bar Harbor Municipal Building
Cottage Street, 288-4098

Freshwater Fishing License Fees

Maine resident:

- Season—\$19.00

Non-resident:

- Season—\$50.00
- 15 day—\$38.00
- 7 day—\$34.00
- 3 day—\$21.00
- 1 day—\$9.00
- Junior (12-15 years)—\$7.00

(Prices subject to change)

COLD WATER FISHING

Echo Lake

- Brook trout
- (Motors over 10 horsepower prohibited)

Long Pond

- Landlocked salmon

Bubble Pond

- Brook trout
- (Motors over 10 horsepower prohibited)

Eagle Lake

- Landlocked salmon
- Brook trout
- Lake trout
- (Motors over 10 horsepower prohibited)

Jordan Pond

- Landlocked salmon
- Lake trout
- (Motors over 10 horsepower prohibited)

Upper Hadlock Pond

- Brook trout

Lower Hadlock Pond

- Brook trout
- Brown trout
- White perch

WARM WATER FISHING

Long Pond

- Smallmouth bass
- Chain pickerel

Hamilton Pond

- Pickerel
- Largemouth bass

Seal Cove Pond

- Chain pickerel
- Smallmouth bass
- White perch
- Yellow perch
- Brown trout

For more information, contact the Maine Department of Inland Fisheries at 207-255-3772.

Most ponds and lakes on the island are public water supplies. Swimming, wading, and pets are prohibited in public waters supplies. Please respect posted regulations.

OCEAN FISHING

No license needed.

Be cautious of surf conditions. Seaweed and algae covered rocks are extremely slippery.

Frazer Point, Schoodic Peninsula

- Mackerel (when running)

Sargent Drive, Somes Sound

- Mackerel and bluefish (when they are running, periodically in mid-July, August, September)
- Striped bass (July, August, September)



Recreation Fact Sheet – Rock Climbing

Acadia National Park offers a variety of fine climbs on small cliffs created during the last continental glaciation. Most of these cliffs are composed of solid coarse-grained pink granite. The longest routes are 3 pitches. Otter Cliffs and Great Head provide a spectacular setting for sea cliff climbing not commonly available elsewhere in the United States.

SAFETY

Climbers assume responsibility for personal safety. On some routes local climbers maintain fixed protection or rappel stations. As always, evaluate them before using. At Otter Cliffs, the park maintains fixed anchors on top that must be used instead of trees to belay several climbs. Evaluate them before using also, and notify the park immediately of safety concerns. Climbers at Great Head and Otter Cliffs should know tides and weather forecasts; climbing at these areas is more difficult and dangerous at high tide or in heavy seas. Climb within your limits. Emergency Phone 288-8791 or 911.

INSTRUCTION/GUIDING

Climbing instruction and guiding are available locally in Bar Harbor.

GUIDEBOOKS

A Climber's Guide to Mount Desert Island by Geoffrey Childs is available for review at the park visitor center. You may also purchase Jeff Butterfield's *Acadia's Climbers Guide*.

COMMONLY USED CLIMBING AREAS

Otter Cliffs: 60' sea cliffs, crack and face climbing, rappel access, routes up to 5.12.
South Wall (Champlain): 3 pitch routes to 5.12, good corners and thin cracks.
Central Slabs: 1 pitch routes, some good beginner routes, routes to 5.10.
South Bubble: 1-3 pitch routes, some friction climbing, good beginner routes.
Great Head: high grade sea cliff climbing, rappel access, know tides and weather.

Many other small areas are used infrequently and good bouldering can be found along the ocean between Sand Beach and Otter Cliffs, and near Blackwoods Campground.

MANAGEMENT

Between 1995 and 1997 a climbing management plan was developed with public input. The plan is expected to guide climbing management for three to five years. Development of this plan, along with legislative mandates and NPS policy, helped formulate the regulations and guidelines listed here. As an important part of climbing management, a climbing advisory group consisting of climbers, park staff, and others makes recommendations to the superintendent on climbing issues. The advisory group works through the existing Acadia National Park Advisory Commission. For further information call the park at 288-8727.

ACADIA NATIONAL PARK CLIMBING REGULATIONS

Daily Use Logs: Climbers should sign daily use logs at Otter Cliffs, Canada Cliffs, and the South Wall, which are available at these three climbing areas, park headquarters, visitor centers, and campgrounds.

New Route Development: New route development is defined as installing fixed protection (including piton use) or clean routes (route cleaning is the systematic and comprehensive removal of soils and vegetation from climbing routes). It is permitted only with the prior approval of the superintendent and only at the Precipice Wall, South Wall of Champlain, Jordan Cliffs, Beech Cliffs, Canada Cliffs, Great Head, Dorr Mountain (pinnacle), Enoch Mountain (upper area) and Mansell Mountain. The climbing advisory group reviews new route development proposals and makes recommendations to the superintendent. If approved, climbers will be issued a permit that covers fixed protection, route cleaning, and the use of a power drill. The advisory group also reviews proposals for the replacement or removal of fixed protection. New routes without fixed protection or route cleaning may be established freely. Effects of these new routes should be similar to those of a cross country hiker—no blazing or clearing of a trail, and largely incidental (not deliberate) effects from passing through. Removal of soils or vegetation from these new routes should be the minimum.

Groups: A maximum size of 12 persons, including guides, applies throughout the park to all organized climbing groups. Groups of friends are not considered organized groups. Groups must make reservations for Otter Cliffs from Saturday of Memorial Day Weekend through Labor Day. Two groups per day may reserve Otter Cliffs. Organized groups of five persons or less do not need reservations.

Commercial Use: Any group or person offering instruction or guiding services in the park for a fee must obtain a business permit (36 CFR 2.15a).

Dogs: Dogs are prohibited at climbing areas to the extent that they may not be tethered or allowed to run loose while their owner is climbing (36CFR 2.15 a). Dogs must be leashed and attended at all times. Dogs can harass wildlife, disturb other visitors, damage vegetation, and accelerate erosion by digging.

Closures: The Central Slabs, Jordan Cliffs, and Beech Cliffs are usually closed to protect nesting peregrine falcons between early April and mid-August. Exact dates will vary annually (36 CFR 1.5).

Fixed Anchors, Otter Cliffs: Climbers must use existing anchors for climbs at the north end of the cliff near the route “A Dare.” Use of trees in this area is prohibited.

LOW IMPACT GUIDELINES

- Avoid using trees for belays to prevent continued soil erosion, especially at Otter Cliffs.
- Use established access trails and walk on solid rock to reduce impacts to soils and vegetation.
- In May and June, black guillemots nest at Otter Cliffs. Check for them, and consider using other routes.
- Social trails are proliferating on top of Otter Cliffs because climbers are using vegetated areas as toilets. A vault toilet is available in the Otter Cliffs parking lot.

ACADIA NATIONAL PARK GROUP CLIMBING RESERVATION INFORMATION FOR OTTER CLIFFS

The Acadia National Park Climbing Management Plan, completed in 1997, recommended a reservation system for organized groups climbing at Otter Cliffs. Otter Cliffs is popular with organized groups for introducing clients to rock climbing. A spectacular oceanfront setting, easy access, and beginner routes all contribute to this popularity.

The Climbing Management Plan described damage to soils and vegetation and problems with crowding at Otter Cliffs. Some of the damage and crowding was due to several groups arriving to climb on the same day. Also, the number of climbing routes, especially beginner routes, is limited. The goal of the reservation system is to spread this group use out across the days of the summer to protect resources and provide a better experience for group and individual climbers.

RESERVATION INFORMATION

Reservations are required for organized commercial and noncommercial climbing groups wanting to climb at Otter Cliffs. They are not needed for groups of friends climbing together. The reservation season will run from Saturday of Memorial Day weekend to Labor Day. Two groups of up to twelve persons, including any guides or instructors, will be accommodated per day. Organized groups of five persons or less do not need a reservation for Otter Cliffs. Organizations will be limited to 10 days of climbing between the above dates.

The group size limit of 12 applies to ALL climbing groups using any park climbing areas at any time of year. The purpose of this size limit is to reduce the effects of large groups on park resources and the climbing experience. We request your cooperation.

RESERVATION PROCEDURES

Complete a separate reservation request for each day you wish to climb. The form can be requested by calling the park at (207) 288-3338. There are no fees. Reservations can be sent by mail or fax, postmarked or faxed March 15 or later. Mail or faxes postmarked or sent earlier than March 15 will be discarded without action. Reservations can also be made in person at park headquarters beginning March 15. Telephone requests will not be accepted. A lottery system will be used to process requests by the date received. We will then notify you by mail. You may call 207-288-3338 Monday through Friday 8am-4:30pm to check availability of dates and for general climbing information. On weekends or holidays, you may leave a message at (207) 288-8791.

An Otter Cliffs climbing reservation does not authorize the exclusive use of any climbing routes. Group leaders are expected to contact other climbers about sharing routes. They are also expected to use extreme courtesy when dealing with other groups that may not be aware of the reservation system. If there is a conflict, work out an appropriate on site solution together and tell the leader to contact the park. You should then contact the park also. We can suggest other climbing areas suitable for groups. Thank you for your cooperation.

LOW IMPACT GUIDELINES

Avoid using trees for belays to prevent continued soil erosion. Use established access trails and walk on solid rock to reduce impacts to soils and vegetation. In spring and early summer, black guillemots nest at Otter Cliffs. Check routes for nests before climbing and consider using other routes to avoid disturbance. The nearest toilet to Otter Cliffs is in the parking lot. Group leaders should approach other climbers about sharing routes.



Section Five — Educational Groups

Chapter Twenty-One – Working with Youth

Educational Activities

Information for Kids

Tree Key

SECTION FIVE – EDUCATIONAL GROUPS

Chapter Twenty-One – Working with Youth

Educational Activities

Information for Kids

Tree Key





Educational Activities

"I hear and I forget. I see and I remember. I do and I understand."

This is the essence of a visit to Acadia National Park that utilizes the park's wonderful resources for teaching. Education becomes active, experiential, and fun. Acadia helps textbooks and lesson plans come to life through a multitude of experiences whether they are discovering a frog at the edge of a pond, a visit to the past at the Islesford Historical Museum, or crouched by a tide pool observing the diversity of life.

Please remember to practice stewardship during your visit to Acadia National Park. Bring only memories (and students!) home. We hope you and your students unearth a vast array of new discoveries and find Acadia a perfect extended classroom!

PROGRAMS FOR EDUCATIONAL GROUPS

The park offers all day, ranger-led programs in natural and cultural history topics for the third through sixth grade classes in the local school districts only. Occasionally, school groups beyond the local area may schedule a special request program by contacting the education coordinator at (207) 288-8822.

CREATING YOUR OWN PROGRAM

Available for free to all teachers or other group leaders interested in planning their own educational trip to the park are teacher guides to each of the programs offered for the local school district. Titles include: *Carriage Road Explorers*, *Junior Rangers*, *Animals of Acadia*, *Carroll Homestead*, *Shoreline Discovery*, *Island Life*, *Where in the World is Tuzigoot?*, *Pond Ecology*, *Geology*, and *Natural Resources*. The background information and pre and post activities in the teacher guides can help to design your own program. Educators are welcome to request a free copy from the education coordinator.

Also available for sale is *The Activity Guide to Acadia National Park*, which covers animals, shoreline, and geology in a more detailed format than the free teacher guides. The Teacher Resource Library at the park's education office offers over 500 book titles as well as videos, discovery kits on animals and geology for loan. Contact the park education coordinator.

The ranger-led programs during the summer can serve as excellent resources for teachers who are interested in learning more about natural history and the history of this area to add to their lessons. Schedules of these activities are available at the

visitor center, Sieur de Monts Spring Nature Center, and the campground entrance stations. The self-guiding trails are also excellent for group exploration. Copies of trail texts are included in this guide in appendix I.

THE JUNIOR RANGER PROGRAM

Although originally designed for children of families visiting the park during the summer season, the junior ranger program can be adapted for use by organized groups. There are two series, one for children seven and younger and one for children eight and older. To become a junior ranger, the candidate must complete a portion of the activities in the junior ranger book and attend ranger-led activities. Upon completion, the junior ranger earns a signed certificate and an official pin. Junior ranger books are available at the visitor center, Sieur de Monts Spring Nature Center, and the entrance stations of Blackwoods and Seawall Campgrounds. An *Activity Guide to the Carriage Roads* is also available.

RANGER-LED PROGRAMS

Several ranger programs are appropriate for children. Check the park newspaper, the *Beaver Log*, for information. Both Blackwoods and Seawall Campground offer campfire programs each evening that are appropriate for children. Call the education coordinator to discuss your specific needs at (207) 288-8822.

HIKING TRAILS GOOD FOR CHILDREN AGES 5 AND UP

- Great Head
- Gorham Mountain
- Bubble Rock
- Beech Mountain
- Ship Harbor
- Wonderland

ACTIVITY IDEAS WITH CHILDREN'S GROUPS FOR SPECIFIC PARK AREAS

Sieur de Monts Spring Area

For a pleasant walk in the area, the Jesup Trail and the Hemlock Trail combine to make an easy one mile roundtrip. Through birch forest to meadow to towering hemlocks, three different Acadia habitats can be enjoyed.

Acadia National Park Nature Center

The Nature Center offers exhibits on the "science behind the scenery" of the park. Learn more about the important work of park biologists and researchers as they, armed with valuable information, protect park resources. In addition, the Nature

Center offers an animal track matching game and taped frog calls (fun to listen to). The lawn outside the Nature Center is a good location to let children run. A small bookstore is available. *Free. Open from mid-May to mid-September.*

Sand Beach Area

See how many different colors of “sand” particles can be found. Can they guess which ones come from shells? What animals might those shells have belonged to?

Jordan Pond Area

Youth groups — The *Carriage Road Explorers* book helps young people discover the carriage roads. It is available for sale at park visitor centers. *Estimated time: 45 minutes.*

Children can create their own trail guide for the **Jordan Pond Nature Trail** using the trail guide as a reference. The lawn in front of the restaurant’s outdoor seating is ideal to run kids! *Estimated time: one hour. See appendix I.*

Tree Key Activity — See how many trees you can identify using the tree key on page 5-11.

Bubble Rock

Youth and Older — The hike up South Bubble to Bubble Rock is appropriate for children ages five and up. Some questions to ask along the route: Why is the forest almost all beech trees? How did Bubble Rock arrive at this particular resting place? Will it stay here forever? What could make it fall? Have students look for other evidence glaciers left behind. Please impress upon youngsters the importance of staying on the trail, for both safety and resource protection.

Cadillac Mountain Summit

For All Ages — See if your group can match the surrounding panorama with the landmark names by using the interpretive signs on the summit.

Ship Harbor Trail

Have children compare life on the mudflat with life in a tidepool. This can be done without digging in the mudflat or removing animals from the tidepool. Have students spread out along the edge of the mudflat and come up with a list of what life is like in the mud, on the mud, or under the water when the tide comes in. Who visits the mudflat for food? What evidence do they see? When visiting tidepools on the rocky point, have students sit at upper level tidepools and list what life is like under the seaweeds, on the rocks, in the water. How are the two areas similar? How

are they different? Where would they like to live? Remember to review the “Suggestions for a Low Impact Visit” on page 3-76.

Carroll Homestead Self-Guiding Trail

Ask children to imagine what the Carroll children did at the Mountain House. What would life have been like without TV, computers, phones, video games, and cars? Let them put together a news show based on their insights. See appendix I.



Information for Kids

Before visiting Acadia National Park see how much you can learn about the park!

THE FACE OF ACADIA

Acadia National Park is on Mount Desert Island off the coast of Maine. The island is 18 miles long and 14 miles wide, cut from granite with steep cliffs dropping to the ocean. One third of the island is Acadia National Park. Acadia has rocky coastline, lakes, ponds, meadows, forest, and mountains. Seven mountains are over 1000 feet high.

Much of the topography is due to the carving action of glaciers, thick slabs of ice that extended south from Canada. Geologists know that many glaciers have covered Maine. The last glacier to cover Maine melted 11,000 years ago.

As the most recent glacier came south, it cut through an east-west ridge of granite, leaving mountains separated by valleys. Big blocks of ice were left behind forming many lakes and ponds. When the glacier melted, the sea level rose, flooding the valleys. One of these valleys is a fjord, Somes Sound. Over the years, the forces of erosion and crashing waves continued to wear down the rock, slowly changing the island. Eventually vegetation began to cover the island.

Today Acadia has a mixed forest. The coniferous forest on Acadia consists of spruce, fir, and pine. This forest survived a large fire in 1947. Deciduous forest trees such as aspen, maple and birch grew back in the burned areas but conifers may someday replace most of them. Plants that are adapted to other special habitats can be found in the marshes, meadows, and on the mountaintops of Acadia.

A PARK IS BORN

In the early 1900s, some summer residents were concerned that the island forests would be cut and that homes someday would line every inch of the rocky coast. A group of citizens began buying land to preserve it. They worked hard for years to convince the Federal Government to take over the land. In 1916 President Woodrow Wilson created Sieur de Monts National Monument. More land was given and in 1919 the name was changed to LaFayette National Park, making it the first national park east of the Mississippi River. In 1929 the name changed one more time to Acadia National Park. All of the land was donated by people who wanted to protect it.

Visitors today enjoy those earlier efforts. The millions who visit Acadia each year can hike on 120 miles of trails, bicycle, horseback ride, cross-country ski or walk on 44

miles of carriage roads, visit tidepools, attend park ranger talks or just sit quietly along the rocky coast.

Acadia is part of the National Park System, which includes 384 areas. These special places are protected because of their natural beauty or historical importance. We can visit our national parks to experience and appreciate nature or to learn about the past. Operated by the Federal Government, the National Parks belong to each of us.

HISTORY! HISTORY! READ ALL ABOUT IT!

Native Americans lived on Mount Desert Island at least 6,000 years ago. Some lived here only part of the year, others year round. A French explorer, Samuel Champlain, was the first European to name the island in 1604. He named the island Isles de Monts Deserts which in French means “the island of barren mountains.” For many years, England and France fought over the area, with England finally winning in 1759.

Early island settlers fished, built boats, farmed and cut timber. In the middle 1850s, people from New York and Boston began to come to enjoy the scenery. Hotels were built in some island towns. Many of these visitors were wealthy and built large summer homes called cottages. In 1947, a large fire burned 17,000 acres, destroying many cottages and scorching almost one third of park land.

THE WILD SIDE OF ACADIA

Acadia is home for a large variety of animals. About 50 species of mammals and over 300 species of birds are found in the park. Some live here year round, while others migrate through. There are also many amphibians and reptiles, including five species of snakes. Common land mammals include beavers, white-tail deer, red fox, muskrats, porcupines, skunks, raccoons, snowshoe hares, red squirrels, and chipmunks. There are also small numbers of black bear, river otter, and coyotes. Some common birds are chickadees, herring gulls and cormorants. Some people are lucky enough to see bald eagles and ospreys. The ocean surrounding the island is home for harbor seals, lobster, harbor porpoise and many kinds of fish. At low tide you can see many marine animals in the pools.

STOP THAT PLANT!

It may sound strange but one way Acadia helps to protect habitat is by removing plants that don't belong. Non-native plants are called exotics. Many of the exotics at Acadia escaped from gardens. Wind, birds, and other animals helped to carry their seeds into the park. Botanists in the park are on the lookout for one exotic in particular - purple loosestrife. This plant loves wetland habitats. Loosestrife has a tendency to “take over” the wetland habitat, choking out plants that should be there.

By removing purple loosestrife and other plants that are not native, Acadia is protecting habitats for plants and animals that do belong.

WATER, WATER, EVERYWHERE

One thing Acadia has is a lot of WATER! There are streams, lakes, ponds, marshes and forty miles of ocean shoreline. Park biologists are concerned with the health of these aquatic systems. They test the water for pH (a measure of acidity) and some pollutants.

There is some concern about acid precipitation which can be in the form of rain, snow, or fog. Rainfall at Acadia is about ten times more acidic than normal rainfall. Acid precipitation can drop the pH level in water habitats. The variety of plants and animals living there could be affected. Although Acadia's water systems are healthy now, biologists continue to monitor so they can detect possible changes.

BACK FROM THE BRINK

Acadia is concerned with the protection of endangered species. The bald eagle (still threatened in Maine) and the peregrine falcon (endangered in Maine) are found at Acadia. Both bird populations declined due to loss of habitat, trapping, hunting, and chemical pesticide use. One pesticide, DDT, caused egg shells to be very thin and crack. The young could not survive.

Acadia National Park took part in a program to reintroduce peregrine chicks into the wild. This is known as hacking. Acadia "hacked" 22 peregrine chicks from 1984-1986. Since 1991, a returning adult pair has raised chicks successfully here. 1991 was the first year since 1956 that peregrines had bred in Acadia. Since 1991, the birds have raised a family. Every spring park biologists watch for signs of the peregrines to return.

OH, SAY CAN YOU SEE?

Many visitors are surprised to learn that Acadia's air is sometimes polluted. Acadia faces a problem with ground level ozone—a pollutant created through a chemical reaction with other pollutants in the presence of sunlight. Wind patterns carry pollutants from the Midwest and east coast cities such as Boston and New York. As these winds reach the coast of Maine and Acadia, unhealthy ozone levels can occur, especially in the summer.

Ozone in the atmosphere protects us from harmful sun rays; ozone near the ground is a problem. Although you can't see ozone, it makes it difficult to breathe, especially for young and elderly people. Often, other visible pollutants are found with ozone.

These pollutants can cause poor visibility. Far away mountains and islands can be hard to see. Air quality specialists monitor the ozone levels and alert visitors when ozone levels are high.

PACKED PARK

Acadia is not a large park, and with millions visiting every year, the park can sometimes be very congested. Especially in the summer, the scenic Park Loop Road is crowded and parking lots overflow. Park planners look to the future to find answers to help lessen the impact crowding has on Acadia.

HELP WANTED – RANGER CLASSIFIEDS

Would you like to work in a National Park someday? Listed below are just some of the jobs that rangers do.

- *Law Enforcement Officer*: enforces rules to protect the park and performs search and rescue when a visitor is lost or hurt.
- *Maintenance Worker*: builds or repairs trails, maintains buildings, restrooms and roads in the park.
- *Biologist*: studies the plants and animals of the park and monitors the park environment.
- *Interpreter*: helps visitors learn more about the park through education programs and providing information.
- *Administrator*: keeps track of money, hires rangers, plan for the park's future.
- *Fire Management Officer*: protects the park from fire.



Tree Key

- 1) Leaves needle-like or very small and scalelike; have cones Go to 2
- 1) Leaves broad, deciduous Go to 12

- 2) Leaves long, needle-like Go to 3
- 2) Leaves small and scalelike, hugging branches Go to 11

- 3) Needles in bundles Go to 4
- 3) Needles occurring singly Go to 8

- 4) Needles in groups of 2 Go to 5
- 4) Needles in groups of more than 2 Go to 6

- 5) Needles long, 3"-8", cones 1 1/2" to 2 1/2" long **Red Pine**
- 5) Needles short, 3/4" - 1 5/8", cones curved and in pairs **Jack Pine**

- 6) Needles many, stemming from small spurs on branches;
deciduous conifer. **Tamarack**
- 6) Needles attached directly to twigs Go to 7

- 7) Needles in groups of 3 **Pitch Pine**
- 7) Needles in groups of 5 **White Pine**

- 8) Needles flat, not sharp **Balsam Fir**
- 8) Needles sharp Go to 9

- 9) Needles 1/4" - 5/8" long, twigs hairy Go to 10
- 9) Needles 3/8" - 3/4" long, twigs hairless **White Spruce**

- 10) Needles 1/4" - 1/2", cones gray-brown **Black Spruce**
- 10) Needles 1/2" - 5/8" long, cones reddish-brown,
hairs on twigs red **Red Spruce**

- 11) Leaves small and scale-like,
occur in flattened sprays; stringy bark **Northern White Cedar**

- 12) Leaves and branches opposite Go to 13
- 12) Leaves and branches alternate Go to 15

- 13) Bark shows pale green stripes, leaves large with 3 lobes,
toothed margin **Striped Maple**
- 13) Leaves with more than 2 lobes, bark not striped Go to 14
- 14) Leaves with 3-5 lobes, green underneath,
twigs and buds hairy **Mountain Maple**
- 14) Leaves with 3-5 lobes, silvery underneath, twigs smooth **Red Maple**
- 15) Leaves compound with 11-17 toothed leaflets,
bark smooth and gray-brown **Mountain Ash**
- 15) Leaves single Go to 16
- 16) Leaves oval, trunk peeling (mature tree) Go to 17
- 16) Leaves wide at base, tapering to narrow point,
trunk not peeling **Gray Birch**
- 17) Leaves hairy underneath, mature tree with white bark,
peeling in layers **White Birch**
- 17) Leaves hairless, mature tree with shiny yellow or silver-
gray bark, peeling in small, thin curls. **Yellow Birch**

Appendix

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B – Wildlife

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Mammal, Amphibian and Reptile Checklist

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Amphibian and Reptile Habitats

Bird Checklist of Acadia National Park

Birding on Mount Desert Island

Arrival of Spring Migrant Birds

C – Plants

Plant Communities on Mount Desert Island

Common Plant Checklist for Acadia National Park

D – Land

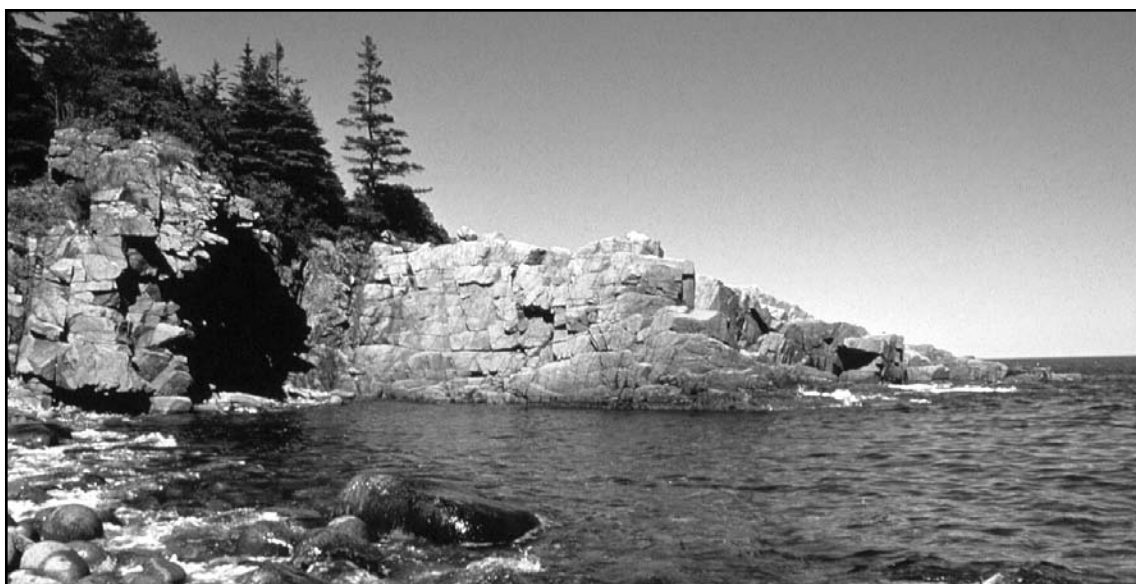
Glacial Geology and Geologic Glossary

Geologic Formations

Wetlands

Lakes and Ponds

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E – History

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F – Other Features in and around Acadia National Park

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APPENDIX A

General Information

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Weather

Helpful Resources

APPENDIX A – GENERAL INFORMATION

Frequently Asked Questions

How many days should I spend in Acadia?

An average stay here is 3-4 days.

Is there any lodging in the park?

Acadia only has two campgrounds, but there are many other types of accommodations in nearby towns.

What is there for children to do in Acadia?

There are many miles of shoreline to explore, hiking trails to climb, and carriage roads on which to bicycle. Two beaches offer salt water or fresh water in which to swim. Children of all ages may also participate in the Acadia Junior Ranger Program. Some of the Ranger-led programs are specifically designed for children.

Where are pets allowed in the park?

Pets are allowed on most hiking trails and carriage roads, as long as they are on a leash no longer than 6 feet. They are allowed at the campgrounds as long as they are not left unattended.

Can I leave my pet in the car while I hike?

It is not recommended that pets be left in cars, especially during the summer months.

Where can I see puffins?

There are 3 nesting islands off the coast of Maine. In order to see puffins, you must take a boat to one of these islands, one of which leaves from Mount Desert Island. Puffins aren't seen on or from Mount Desert Island.

What is the origin of "Acadia?"

Acadia probably stems from a name given to the area by the explorer, Giovanni Verrazano, when he sailed by in 1524. The shoreline reminded him of a part of Greece named Arcadia.

Where does the term Downeast come from?

During the 18th and 19th centuries, Maine was a shipping capital. When schooners sailed from Boston to ports in Maine, they traveled to the east. They also sailed downwind (with the wind at their backs). This led to the expression "Downeast."

Is it Mount Desert Island or Mount Dessert Island?

Samuel Champlain, a French navigator and cartographer, sailed by Mount Desert Island in 1604. He named it “Isles des Monts Desert,” with the accent on the last syllable, as it would be in the French language. He wasn’t implying that it was a desert. The phrase means “island of barren mountains.” That’s why it’s pronounced both as it is spelled and as the French phrase would be pronounced. (dessert)

How far are you from Boston?

264 miles

How long is the loop road and how long will it take to drive it?

27 miles, 3-4 hours including some stops

What Ranger-led activities are available?

Between mid May and mid October you may accompany a Ranger on a hike, a shoreline walk, or a boat cruise. Rangers also offer talks on various subjects, evening amphitheater programs at the campgrounds, children’s programs, and provide opportunities to view peregrine falcons and raptors.

When does the Island Explorer Shuttle Bus run and where does it go?

The Island Explorer runs between late June and mid October. It travels between Bar Harbor, Northeast Harbor, Southwest Harbor and various locations in the park.

How cold is the water at Sand Beach?

Between 55-60 degrees F

CAMPING**When can I make reservations for Blackwoods?**

Call 1-800-365-2267 beginning February 5th.

I have never been to Acadia. Should I camp at Blackwoods or Seawall?

Some people prefer to be closer to the main part of the park, the carriage roads, and Bar Harbor, so choose Blackwoods. Others prefer to be in a more remote area of the island, so choose Seawall. As far as facilities are concerned, they are the same, and both have wooded sites with no sites directly on the ocean.

Can I winter camp in Acadia?

Yes. You may winter camp at Blackwoods Campground.

Is there backcountry camping in Acadia?

No. Backcountry camping is prohibited because the island is too small and the environment too fragile.

How do I make a group camping reservation?

Call or email us for a form. See Camping section for more details.

When and how can I make reservations to camp at Isle au Haut?

Call (207)-288-3338 for a reservation card, to be returned with a \$25 special use permit fee no earlier than April 1.

Does my camping fee cover the entrance fee into the park?

No. The two fees are separate.

Are there water and electric hookups in the park campgrounds?

No, but there is a dump station.

Are there any campsites on the ocean in Blackwoods or Seawall campground?

No. They are both a short walk (5-10 minutes) to the ocean.

Are there private campgrounds on the island?

Yes, there are about 12 private campgrounds scattered around the island. We will be glad to send you a list.

WEATHER

When are blackflies at Acadia?

Usually they are most numerous between mid May and mid June, but that could vary from spring to spring. They breed in running water, so they will be more prevalent if it is a rainy spring.

How much snow does Acadia receive?

Average snowfall in Acadia is about 61".

Can I rent skis nearby?

Skis, snowshoes, and skates can be rented in Bar Harbor.

Is the road to Cadillac Mountain open to vehicles in the winter?

No, access is by snowmobile, skis, or on foot. It is a minimum walk of nine miles round trip. Temperatures on Cadillac can be well below zero, with extremely high winds and drifting snow.

Can I hike any of the mountain trails in the winter?

Hiking mountain trails in the winter is not recommended. Trail markers and icy patches are obscured by drifting snow creating very dangerous conditions for hikers.

When does the Park Loop Road open and close each year?

Each year the Park Loop Road closes the first storm after Veterans Day or the Monday after Thanksgiving, whichever comes first. It reopens between mid and late April, depending on the weather. The Ocean Drive section remains open all year.

What is the best time to see fall foliage?

The leaves start turning their fall colors in September, but the peak time is usually the first two weeks of October.

APPENDIX A – GENERAL INFORMATION

Weather

Acadia National Park's weather is largely a product of latitude and marine influences. The Maine coastal climate has been ranked second only to the Pacific Northwest in annual precipitation. Precipitation occurs in every form. Rain falls in every month with an annual average of 48". The park also has a respectable annual average of 60.7" of snow. The tempering maritime conditions, however, with frequent freezing and thawing, prevent large, long-term accumulations.

On a daily and annual basis, Maine temperatures are more severe inland than they are on Mount Desert Island and on the coast in general. Studies also indicate that on the island itself, micro climates exist. Acadia's shoreline areas show less temperature range than some inland areas of the park. Extended periods above 90 degrees F and below 0 degrees F are rare at Acadia National Park.

Prevailing winds blow from the southwest in the spring and summer, and the northwest in the fall and winter. Three localized weather systems dominate Acadia. In the summer, the typical weather system is the "smokey sou'wester," a warm flow of air over the cool Gulf of Maine that produces the heaviest fogs of the year. These southwesterly patterns are associated with low pressure systems and may last for several days. The opposite of the southwester is the Bermuda High, a stationary high pressure system that sits over the Atlantic to the southwest and dominates New England weather for days. This system repels intruding fronts and weather often becomes hot and humid. The winter often brings the familiar nor'easters. These are associated with strong northeast winds that bring lots of snow and rain to coastal New England.

Spring can be foggy with temperatures ranging between 30 and 70 degrees. Blackflies are common in late May and June. Mosquitoes can also be bothersome. Wear light-colored clothing, long sleeve shirts and long pants for protection. Annual rainfall is 48 inches.

Summer daytime temperatures range from 45 to 90 degrees. Evenings are cooler. Dressing in layers is advisable for any boating or hiking activities. Ocean water temperatures range from 50 to 60 degrees. Lake water temperatures range from 55 to 70 degrees.

Autumn temperatures can range from low 70s during the day to freezing during the night. Come prepared for all types of weather, from sun to fog, from downpours to flurries. Fall foliage often peaks during the first couple of weeks in October.

Weather conditions over the summer, such as drought, may alter the time that the leaves peak. Visit Maine Publicity Bureau for state fall foliage information.

Winter: Due to Acadia's coastal location, snow and weather conditions change rapidly. Temperatures vary from mid-30s to below zero. The park averages 61" of snow annually. For the latest in weather information, call the local weather phone line at (207) 667-8910, check the current weather conditions on the internet, or call the park at (207) 288-3338.

WEATHER OF ACADIA NATIONAL PARK

| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|
| Average day temperature in Fahrenheit | 32 | 33 | 41 | 52 | 64 | 72 | 77 | 76 | 68 | 58 | 48 | 37 |
| Average night temperature in Fahrenheit | 14 | 15 | 25 | 33 | 42 | 51 | 57 | 56 | 49 | 41 | 33 | 19 |
| Average rainfall in inches | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 6 | 5 |
| Average snowfall in inches | 16 | 17 | 11 | 3 | T* | 0 | 0 | 0 | 0 | T* | 2 | 12 |

*Trace

Average annual rainfall: 48 inches

Average annual snowfall: 61 inches

These figures were compiled over 45 years, from 1940-1985, as part of the National Weather Service Cooperative Observer Program.

APPENDIX A – GENERAL INFORMATION

Helpful Resources

Resources can be purchased at park visitor centers and some local bookstores or can be ordered in advance from Eastern National (see page 1-30).

GENERAL INFORMATION ON ACADIA AND NATIONAL PARKS

- *Acadia's Park Loop Road*, by Robert Thayer, 48 pages
- *Acadia: The Story Behind the Scenery*, by Robert Rothe, 48 pages
- *AMC Discover Acadia: Guide to Hiking, Biking, Paddling*, by J&M Monkman, 279 pages plus separate map
- *Complete Guide to America's National Parks*, Fodors and National Park Foundation, 448 pages
- *Discovering Acadia*, by Laurie Hobbs-Olson, 64 pages
- *Geology of Mount Desert Island: A Visitor's Guide*, A State of Maine booklet, 50 pages
- *Mr. Rockefeller's Roads*, by Anne Rockefeller Roberts, 166 pages
- *National Parks: The American Experience*, by Alfred Runte, 335 pages
- *Native Birds of Mount Desert Island and Acadia National Park*, by Ralph H. Long, 41 pages
- *One Man's Museum—A History of the Islesford Historical Museum*, by Meg Fernald, 17 pages
- *The Story of Acadia National Park, Memoirs of George B. Dorr*, 127 pages

TRAIL GUIDES – MAPS

- *A Walk in the Park*, by T.A. St. Germain, Jr., text and maps, 144 pages
- *AMC Acadia National Park Hiking and Biking Map*
- *An Outdoor Family Guide to Acadia National Park*, by Lisa Collins Evans, 192 pages, text and map
- *Great Walks Acadia National Park and Mount Desert Island*, by Robert Gilmore, 174 pages
- *Pocket Guide to Biking Mount Desert Island*, by A. Minutolo, 61 pages
- *Pocket Guide to Hiking Mount Desert Island*, by Earl Brechlin, 71 pages
- *Pocket Guide to the Carriage Roads of Acadia National Park*, by Diana F. Abrell, 40 pages including fold-out map
- *Topographical Map of Mount Desert Island*, Maine by Delorme Publishing, 1984
- *Trails Illustrated Topo Map: Acadia National Park-Mount Desert Island-Isle au Haut*
- *U.S. Geological Survey Map: Acadia National Park and Vicinity*, 1976
- *Mac's Field Guide to Acadia National Park* (laminated card illustrates plants and animals common to Acadia)

TEACHERS' GUIDES AND ACTIVITY BOOKS

- *Activity Guide to Acadia National Park for Teachers, Youth Leaders, and Interested Parents*, by Carol Peterson and Meg Scheid, 77 pages
- *Acadia National Park Junior Ranger Booklet*—Ages 7 and under or Ages 8 and up
- *Discovering Acadia National Park—A Young Naturalist's Guide*, by Meg Scheid, 80 pages
- *Exploring the Carriage Roads: An Activity Book*, by Carol Peterson
- *Shoreline Discovery: An Educator's Guide to Acadia's Coastline*, National Parks as Classroom Series, by Wylie and Hobbs-Olson
- *Where in the World is Tuzigoot: An Educators Guide to the National Park System*, National Parks as Classrooms Series, by Wylie and Petrie

APPENDIX B

Wildlife

- Endangered Wildlife Categories
- Mammal Checklist
- Mammal Habitats
- Amphibian and Reptile Habitats
- Birding on Mount Desert Island
- Bird Checklist of Acadia National Park
- Arrival of Spring Migrant Birds

Endangered Wildlife Categories in the State of Maine

ENDANGERED SPECIES

A **Maine Endangered Species** is one in immediate danger of extirpation from the state due to critically low or declining numbers. Habitat loss or degradation, overexploitation, pollution, and disease are all causative factors. This includes any species that spends a significant part of its life cycle within the state of Maine, and is not limited just to those that breed in Maine. Continuous survival of these species within the state is unlikely without the implementation of special protective measures. In addition, any federally listed Endangered Species occurring in Maine is included in this listing.

THREATENED SPECIES

A **Maine Threatened Species** is not as critically jeopardized by extirpation as an endangered species, but will probably become endangered if current population levels experience any further declines. This includes any species that spends a significant part of its life cycle in the state of Maine, and is not limited just to species that breed in Maine. Any indigenous wildlife species that has been documented to be rare or declining within the state, and which is likely to become endangered in Maine in the foreseeable future, is included. In addition, any federally listed threatened species occurring in Maine is included in this listing or in the endangered listing.

SPECIAL CONCERN SPECIES

A species that is not endangered or threatened, but is particularly vulnerable to potential population decline due to restricted distribution and/or habitat loss.

WATCH LIST SPECIES

Species that do not meet the rigorous requirements of inclusion under the above categories, but do warrant special attention.

EXTIRPATED SPECIES

Species of wildlife that were once indigenous to Maine but have not been documented as naturally occurring in the state for the past 50 years.

APPENDIX B – WILDLIFE

Mammal, Amphibian, and Reptile Checklist

STATUS DESCRIPTIONS

Extinct: species no longer exists

Extirpated: human induced absence: hunted, trapped, driven out from former range

* **Maine Species of Indeterminate Status:** believed to be endangered, threatened, or of special concern status, but insufficient data is available

~ **Maine Watch List:** species that warrant special attention, but do not meet requirements of other categories

+ **Federally Listed Endangered Species:** in danger of extinction throughout all or a significant part of its range

Bats

Northern long-eared bat: common*

Little brown bat: common*

Silver-haired bat: unknown*

Big brown bat: common*

Red bat: uncommon*

Hoary bat: uncommon*

Eastern small-footed bat: uncommon

Bears

Black Bear: uncommon

Canids

Eastern timber wolf (gray wolf): extirpated

Eastern coyote: common

Red fox: common

Felines

Bobcat: rare

Lynx: extirpated

Eastern cougar: extirpated

Frogs and Toads

American toad: uncommon

Spring peeper: common

Gray tree frog: uncommon

Bullfrog: common

Green frog: common

Pickerel frog: common

Leopard frog (northern): uncommon

Wood frog: common

Hoofed Browsers

White-tailed deer: common

Moose: uncommon

Eastern woodland caribou: extirpated

American elk: extirpated

Marine Mammals

Harbor seal: common

Gray seal: uncommon

Harbor porpoise: common

White-sided dolphin: uncommon

White-beaked dolphin: rare visitor

Pilot whale: rare

Finback whale (seasonal): common+

Minke whale: common

Humpback whale: uncommon

Right whale: rare+

Orca (killer whale): rare visitor

Beluga: rare visitor

Rabbits and Hares

Snowshoe hare (varying hare): common

Raccoons

Raccoon: common

Rodents

Porcupine: common
Beaver (re-introduced, 1921): common
Woodchuck: common
Muskrat: common
Gray squirrel: common
Red squirrel: common
Eastern chipmunk: common
Deer mouse: common
White-footed mouse: common
Southern bog lemming: unknown ~
Boreal red-backed vole: common
Meadow vole: common
Northern flying squirrel: common
Southern flying squirrel: uncommon
Meadow jumping mouse: common
Woodland jumping mouse: common
House mouse: uncommon
Norway rat: uncommon

Salamanders

Spotted salamander: common
Red-spotted newt: common
Dusky salamander: uncommon
Red-backed salamander: common
Four-toed salamander: uncommon
Two-lined salamander: common
Blue-spotted salamander: unknown

Shrews and Moles

Masked shrew: common ~
Northern water shrew: uncommon ~
Pygmy shrew: unknown ~
Short-tailed shrew: common ~
Star-nosed mole: common
Hairy-tailed mole: uncommon
Smokey mole: uncommon

Snakes

Red-bellied snake: common

Garter snake: common

Ringneck snake: common

Smooth Green Snake: common

Northern Milk Snake: common

Turtles

Snapping turtle: common

Stinkpot turtle: accidental

Eastern painted turtle: common

Central painted turtle: unknown

Wood turtle: accidental

Blanding's turtle: accidental

Weasels

Short-tailed weasel (ermine): common

Long-tailed weasel: common

Mink: common

River otter: common

Striped skunk: common

Fisher: unknown

Sea mink: extinct

APPENDIX B – WILDLIFE

Mammal Habitats

Mount Desert Island offers an environment rich with the presence of somewhat shy and secretive wildlife. Many leave signs of their presence such as nipped-off twigs, feces, tracks, eggshells, shed hairs, or nut hulls. Perhaps the most effective strategy for observing wildlife is to sit quietly for an hour or so in some secluded spot and wait for local species to declare themselves in the course of their daily lives. It may take repeated visits over many years to a variety of habitats to spot even half the species listed below, but the result is apt to be highly satisfying as a revelation of the hidden residents of Acadia National Park.

Bats

Little brown myotis: caves, attics, barns, tunnels, hollow trees

Silver-haired bat: forested areas near lakes or streams

Big brown bat: buildings, bridges, caves, tunnels, hollow trees

Hoary bat: wooded areas where it roosts in trees 10 to 15 feet above ground; uncommon

Keen's myotis: uncommon

Red bat: wooded areas where it roosts in trees 5 to 40 feet above ground; uncommon

Bears

Black bear: uncommon

Canids

Coyote: edges of second growth forests, open brushy fields, forest openings

Red fox: prefers a mixture of forest and open areas

Felines

Bobcat: mixed deciduous-coniferous and hardwood forests broken by fields and roads; rare

Hares

Snowshoe hare: woodlands with dense brushy understory; coniferous swamps

Hoofed Browsers

White-tailed deer: forest edges, swamp borders, woods interspersed with fields

Moose: second-growth boreal forests with semi-open areas and swamps or lakes; uncommon

Raccoons

Raccoon: wooded areas interrupted by fields and water courses

Rodents

Eastern chipmunk: deciduous woodlands with abundant cover

Woodchuck: edges of woodlands, open cultivated land, pastures, meadows

Gray squirrel: deciduous and mixed forests

Red squirrel: coniferous, mixed, and occasionally deciduous forests

Northern flying squirrel: mixed mature coniferous and deciduous forests

Beaver: slowly flowing brooks, usually bordered by woodland

Deer mouse: coniferous or mixed forests, field borders, stone walls, out-buildings

Boreal red-backed vole: cool moist deciduous, mixed, or coniferous forests

Meadow vole: fields, pastures, orchards, marshes and meadows, swamps, bogs

Muskrat: marshes, shallow portions of lakes, ponds, swamps, streams, ditches

House mouse: buildings, fields, corncribs

Meadow jumping mouse: moist, open grassy and brushy marshes and meadows

White-footed mouse: forests and fields; not habitat specific

Woodland jumping mouse: brush and herbaceous vegetation in forests, near water

Porcupine: mixed or coniferous forests, especially northern hardwood-hemlock

House mouse: uncommon

Norway rat: wherever food is abundant; waterfronts, farms, towns, dumps;
uncommon

Southern flying squirrel: uncommon

Shrews and Moles

Masked shrew: woodlands with grasses, rocks, logs, or stumps; bogs

Water shrew: wet areas along ponds and streams in coniferous forests

Northern short-tailed shrew: both timbered and fairly open habitats

Star-nosed mole: low wet ground near bodies of water

Short-tailed shrew: forests, grasslands, marshes, brushy areas

Hairy-tailed mole: open woods and meadows with light, sandy loam; uncommon

Smokey mole: uncommon

Weasels

Ermine: wooded or open country with thickets, rock piles, and other heavy cover

Long-tailed weasel: open woods and woodland edges, grasslands, river bottomlands

Mink: streambanks, lakeshores, marshes

Striped skunk: semi-open country, woods and meadows, agricultural lands, suburbs

River otter: borders of streams, lakes or other wetlands in forested areas

Amphibian and Reptile Habitats

Common Species

Spotted salamander: moist woods, stream banks, beneath stones, logs, boards

Red-spotted newt: ponds, weedy areas of lakes, marshes, ditches, backwaters, pools

Redback salamander: mixed deciduous or coniferous woods; under stones, moist litter

Four-toed salamander: wet woodlands w. sphagnum moss; tamarack bogs

Northern two-lined salamander: floodplain bottoms to moist forest; streams; seeps

Eastern American toad: gardens, woods, yards with cover and damp soil (limited distribution on island)

Northern spring peeper: marshy or wet woods; sphagnum bogs; near ponds and swamps

Bullfrog: near shorelines of large bodies of water with emergent vegetation

Green frog: shallow freshwater margins

Wood frog: wooded areas, often far from water in summer

Pickerel frog: colder waters of lakes, ponds, streams, springs, sphagnum bogs

Common snapping turtle: bottom dweller in any permanent/semi-permanent water body

Eastern painted turtle: quiet, shallow ponds, marshes, woodland pools, shores, bogs

Northern red belly snake: moist woods, hillsides, bogs, meadows; under debris

Eastern garter snake: island-wide

Northern ringneck snake: secretive, under cover in moist shady woodlands

Eastern smooth green snake: upland areas, grassy fields, meadows

Eastern milk snake: farmlands, woods, outbuildings, meadows, river bottoms, bogs

Possible Species (not recently found within range)

Blue-spotted salamander: wooded, swampy or moist areas

Spring salamander: cold, clean undisturbed mountain streams; cool seeps and springs in forested areas

Northern dusky salamander: woodlands at the margins of cool running water

Northern leopard frog: wet open meadows and fields; wet woods (not reported since 1950s)

Gray tree frog: wooded areas with small trees, shrubs, and bushes near shallow water

Not reported since 1950s

Wood turtle: meandering streams with sandy bottoms & overhanging alders

Stinkpot: still, shallow, clear lakes, ponds, rivers; muddy bottoms preferred

Northern brown snake: island-wide

Birding on Mount Desert Island

With over 273 species of birds seen around Mount Desert Island, Acadia National Park is truly a good place to look for them. This is due in part to the meeting of northern and southern forest types, along with open ocean, sheltered bays, and freshwater marshes and ponds. The distribution of individual birds, however, changes with the time of day, the season, and the year. Seeing certain species may take a lot of patience and persistence, and being in the right place at the right time. To find birds, spend time in the preferred habitat of the species you are looking for, noted in the bird checklist or in field guides, and follow the tips below.

BIRDING TIPS FOR THE ACADIA AREA

Bald eagles and ospreys nest on many off-shore islands around Mount Desert Island. They may be seen near any body of water, especially on nature cruises. Look for them on top of trees, on rocky islands, or flying overhead. Give a wide berth to any eagle nests and do not land on an island with an active nest. *See Outer Islands, page 3-96.*

Common loons breed on many freshwater lakes and ponds. They may be heard calling on Echo Lake, Eagle Lake, Bubble Pond, Jordan Pond, and Long Pond. Loons move into saltwater bays for the winter.

Acadia is at the southern edge of the distribution of many **northern species**, such as boreal chickadees, gray jays, red and white-winged crossbills, spruce grouse, and black-backed woodpeckers. They may be rare or absent, however, in any given year. Spruce forests, especially on the west side of the island, such as at Wonderland or Ship Harbor, are the best places to look.

Atlantic puffins are birds of the open ocean, rarely seen at Acadia National Park. They nest on nearby Petit Manan National Wildlife Refuge and can be seen during various commercial boat trips.

Peregrine falcons nest on some of the park's cliffs between late March and early August, and adults may be present into December. The Precipice Trail parking lot is a good vantage point from which to look for these falcons. Park staff may be there with spotting scopes to help you see them. Help protect these falcons by honoring posted trail closures.

SEASONALLY

In the fall: watch for migrating falcons, hawks, and other birds of prey from any mountain in the park, especially when the winds blow from a northerly direction. Mixed flocks of migrating warblers and other songbirds are often heralded by the calls of chickadees and may be encountered along the south end of the island and by bodies of water.

In the winter: seabirds, like oldsquaws, common eiders, and red-necked grebes, are the easiest birds to see in the coldest months. Look for them along Ocean Drive, around Bar Island, or in any sheltered bay. Northern shrikes, great gray owls, and northern hawk owls are sometimes found in open areas like Great Meadow and Beech Mountain.

BIRDING SPOTS

Sieur de Monts Spring is one of the best birding locations, especially during migration and nesting. Deciduous woods attracted more southern species. Listen and look for American woodcock, black-billed cuckoo, great crested flycatcher, eastern peewee, eastern phoebe, alder and least flycatchers, wood thrush, veery, red-eyed vireo, black-and-white and black-throated green warblers, American redstart, ovenbird, scarlet tanager, rose-breasted grosbeak, and swamp sparrow. Stop in at the nature center to check for recent sightings and be sure to add your own.

Otter Point is a summertime home to northern species like the black-backed three-toed woodpecker, boreal chickadee, and gray jay.

Ship Harbor's coastal spruce forest harbors up to eighteen species of warblers. Look for shorebirds in search of food in the harbor's quiet cove and mudflats.

APPENDIX B – WILDLIFE

Bird Checklist of Acadia National Park

This checklist covers the entire Acadia National Park archipelago from Schoodic Point east, to Isle au Haut west, and Mount Desert Rock south, including all of Mount Desert Island.

Species that have been recorded five or more times within the Acadia National Park area are shown in this checklist. These bird species may be here year round, from spring to autumn, or only in one season. For specifics on when they can be sighted, pick up a copy of Acadia National Park's Bird List. Look at the migrant list for species return to Acadia in appendix B. Accidental species are listed separately. Please report details of unusual sightings to Acadia National Park naturalists.

ABUNDANCE DESIGNATIONS

- + Irregular:** may be intermittently abundant, common or absent
- * Breeds:** confirmed breeding since 1965

HABITAT

Species restricted to one or two habitat types are assigned code letters based on the following key:

- B** Brushy areas
- M** Mixed Forest
- C** Coastal
- O** Open Fields
- D** Deciduous forest
- P** Pelagic
- E** Evergreen
- R** Residential
- F** Fresh marsh, bogs
- S** Salt marsh
- I** Offshore islands
- T** Tidal zones
- S** Lakes

Loons

- ___ Red-throated Loon **C, P**
- ___ Common Loon *

Grebes

- ___ Pied-billed Grebe *
- ___ Horned Grebe **C**
- ___ Red-necked Grebe **C**

Shearwaters

- ___ Northern Fulmar + **P**
- ___ Cory's Shearwater **P**
- ___ Greater Shearwater + **P**
- ___ Sooty Shearwater
- ___ Manx Shearwater **P**

Storm-petrels

- ___ Wilson's Storm-Petrel + **P**
- ___ Leach's Storm-Petrel * **I**

Gannets

- ___ Northern Gannet **C, P**

Cormorants

- ___ Great Cormorant * **C, I**
- ___ Double-crested Cormorant *

Bitterns and Herons

- ___ American Bittern *
- ___ Least Bittern * **F**
- ___ Great Blue Heron *
- ___ Great Egret **S**
- ___ Snowy Egret **S**
- ___ Little Blue Heron **S**
- ___ Cattle Egret **O**
- ___ Green Heron *
- ___ Black-crowned Night-Heron
- ___ Yellow-crowned Night-Heron

Ibises

___ Glossy Ibis

Geese and Ducks

___ Snow Goose
___ Brant + **C, I**
___ Canada Goose
___ Wood Duck * **F, S**
___ Green-winged Teal *
___ American Black Duck *
___ Mallard *
___ Northern Pintail
___ Blue-winged Teal *
___ American Wigeon
___ Ring-necked Duck * **S**
___ Greater Scaup **C**
___ Common Eider * **C, I**
___ King Eider **C**
___ Harlequin Duck **I**
___ Oldsquaw **C**
___ Black Scoter **C**
___ Surf Scoter **C**
___ White-winged Scoter **C**
___ Common Goldeneye **C, S**
___ Barrow's Goldeneye **C**
___ Bufflehead **C, S**
___ Hooded Merganser
___ Common Merganser * **C**
___ Red-breasted Merganser * **C, S**
___ Ruddy Duck

Rails

___ Virginia Rail * **F**
___ Sora *
___ Purple Gallinule **F**
___ Common Moorhen (Gallinule)
___ American Coot **F, S**

Plovers

- ___ Black-bellied Plover
- ___ American Golden-Plover **O, T**
- ___ Semi-palmated Plover **T**
- ___ Killdeer * **O, T**

Sandpipers

- ___ Greater Yellowlegs
- ___ Lesser Yellowlegs
- ___ Solitary Sandpiper
- ___ Willet
- ___ Spotted Sandpiper *
- ___ Whimbrel **O, T**
- ___ Upland Sandpiper
- ___ Hudsonian Godwit
- ___ Ruddy Turnstone
- ___ Red Knot **T**
- ___ Sanderling **T**
- ___ Semipalmated Sandpiper **S, T**
- ___ Least Sandpiper **S, T**
- ___ White-rumped Sandpiper **T**
- ___ Pectoral Sandpiper **S**
- ___ Purple Sandpiper + **C, T**
- ___ Dunlin **I, T**
- ___ Short-billed Dowitcher **S, T**
- ___ Common Snipe
- ___ American Woodcock *
- ___ Red-necked Phalarope **P**
- ___ Red Phalarope **P**

Alcids

- ___ Dovekie + **P**
- ___ Common Murre **P**
- ___ Thick-billed Murre **P**
- ___ Razorbill **P**
- ___ Black Guillemot * **C, P**
- ___ Atlantic Puffin **P**

Jaegers, Gulls and Terns

- ___ Pomarine Jaeger **P**
- ___ Parasitic Jaeger **P**
- ___ Laughing Gull * **C, T**
- ___ Common Black-headed Gull **C, T**
- ___ Bonaparte's Gull **C, T**
- ___ Ring-billed Gull
- ___ Herring Gull *
- ___ Iceland Gull
- ___ Glaucous Gull
- ___ Great Black-backed Gull *
- ___ Black-legged Kittiwake **C, P**
- ___ Royal Tern **C, P**
- ___ Roseate Tern **C**
- ___ Common Tern * **C, P**
- ___ Arctic Tern * **C, P**
- ___ Least Tern **C, P**
- ___ Black Tern

Vultures

- ___ Turkey Vulture

Hawks and Eagles

- ___ Osprey *
- ___ Bald Eagle *
- ___ Northern Harrier *
- ___ Sharp-shinned Hawk *
- ___ Cooper's Hawk *
- ___ Northern Goshawk *
- ___ Red-shouldered Hawk
- ___ Broad-winged Hawk *
- ___ Red-tailed Hawk *
- ___ Rough-legged Hawk
- ___ Golden Eagle

Falcons

- ___ American Kestrel
- ___ Merlin
- ___ Peregrine Falcon
- ___ Gyrfalcon *

Grouse

- ___ Ruffed Grouse *
- ___ Spruce Grouse * **E**
- ___ Northern Bobwhite *
- ___ Ring-necked Pheasant *

Doves

- ___ Rock Dove *
- ___ Mourning Dove *

Cuckoos

- ___ Black-billed Cuckoo *
- ___ Yellow-billed Cuckoo

Owls

- ___ Great Horned Owl *
- ___ Snowy Owl +
- ___ Northern Hawk-Owl +
- ___ Barred Owl *
- ___ Long-eared Owl *
- ___ Short-eared Owl
- ___ Northern Saw-whet Owl *

Nightjars

- ___ Common Nighthawk *
- ___ Whip-poor-will *

Swifts

- ___ Chimney Swift * **R**

Hummingbirds

- ___ Ruby-throated Hummingbird *

Kingfishers

- ___ Belted Kingfisher

Woodpeckers

- ___ Red-headed Woodpecker
- ___ Red-bellied Woodpecker
- ___ Yellow-bellied Sapsucker *
- ___ Downy Woodpecker *
- ___ Hairy Woodpecker *
- ___ Three-toed Woodpecker **E, M**
- ___ Black-backed Woodpecker * **E, M**
- ___ Northern Flicker *
- ___ Pileated Woodpecker *

Flycatchers

- ___ Olive-sided Flycatcher * **E, M**
- ___ Eastern Wood-Pewee *
- ___ Yellow-bellied Flycatcher *
- ___ Alder Flycatcher *
- ___ Least Flycatcher *
- ___ Eastern Phoebe *
- ___ Great Crested Flycatcher *
- ___ Western Kingbird
- ___ Eastern Kingbird *

Larks

- ___ Horned Lark **T**

Swallows

- ___ Purple Martin
- ___ Tree Swallow *
- ___ Northern Rough-winged Swallow
- ___ Bank Swallow *
- ___ Cliff Swallow *
- ___ Barn Swallow *

Jays and Crows

- ___ Gray Jay * **E, M**
- ___ Blue Jay *
- ___ American Crow *
- ___ Common Raven *

Chickadees

- ___ Black-capped Chickadee *
- ___ Boreal Chickadee * **E, M**

Nuthatches

- ___ Red-breasted Nuthatch *
- ___ White-breasted Nuthatch * **D, R**

Creepers

- ___ Brown Creeper *

Wrens

- ___ Carolina Wren
- ___ House Wren * **B, R**
- ___ Winter Wren * **E, M**
- ___ Sedge Wren * **F, O**
- ___ Marsh Wren

Thrushes

- ___ Golden-crowned Kinglet *
- ___ Ruby-crowned Kinglet *
- ___ Blue-gray Gnatcatcher
- ___ Eastern Bluebird *
- ___ Veery *
- ___ Gray-cheeked Thrush
- ___ Swainson's Thrush *
- ___ Hermit Thrush *
- ___ Wood Thrush *
- ___ American Robin *

Mimics

- ___ Gray Catbird *
- ___ Northern Mockingbird
- ___ Brown Thrasher *

Pipits

- ___ American Pipit **O, T**

Waxwings

- ___ Bohemian Waxwing +
- ___ Cedar Waxwing *

Shrikes

___ Northern Shrike

Starlings

___ European Starling *

Vireos

___ Solitary Vireo *

___ Warbling Vireo *

___ Philadelphia Vireo

___ Red-Eyed Vireo *

Wood Warblers

___ Blue-winged Warbler

___ Golden-winged Warbler

___ Tennessee Warbler *

___ Orange-crowned Warbler

___ Nashville Warbler *

___ Northern Parula *

___ Yellow Warbler *

___ Chestnut-sided Warbler *

___ Magnolia Warbler *

___ Cape May Warbler *

___ Black-throated Blue Warbler *

___ Yellow-rumped Warbler *

___ Black-throated Green Warbler *

___ Blackburnian Warbler *

___ Pine Warbler *

___ Prairie Warbler

___ Palm Warbler *

___ Bay-breasted Warbler *

___ Blackpoll Warbler *

___ Black-and-white Warbler *

___ American Redstart *

___ Ovenbird *

___ Northern Waterthrush *

___ Mourning Warbler

___ Common Yellowthroat *

___ Wilson's Warbler *

___ Canada Warbler *

___ Yellow-breasted Chat

Tanagers

- ___ Summer Tanager
- ___ Scarlet Tanager *

Cardinals

- ___ Northern Cardinal * **B, R**
- ___ Rose-breasted Grosbeak *
- ___ Blue Grosbeak
- ___ Indigo Bunting *
- ___ Dickcissel

New World Sparrows

- ___ Eastern Towhee *
- ___ American Tree Sparrow
- ___ Chipping Sparrow *
- ___ Clay-colored Sparrow
- ___ Field Sparrow *
- ___ Vesper Sparrow
- ___ Savannah Sparrow *
- ___ Nelson's Sharp-tailed Sparrow *
- ___ Fox Sparrow
- ___ Song Sparrow *
- ___ Lincoln's Sparrow * **F**
- ___ Swamp Sparrow * **B, F**
- ___ White-throated Sparrow *
- ___ White-crowned Sparrow **B, R**
- ___ Dark-Eyed Junco *
- ___ Lapland Longspur **O, T**
- ___ Snow Bunting **O, T**

Blackbirds and Orioles

- ___ Bobolink *
- ___ Red-winged Blackbird *
- ___ Eastern Meadowlark * **O, B**
- ___ Rusty Blackbird
- ___ Common Grackle *
- ___ Brown-headed Cowbird *
- ___ Orchard Oriole
- ___ Baltimore Oriole *

Finches

- ___ Pine Grosbeak +
- ___ Purple Finch * +
- ___ House Finch **R**
- ___ Red Crossbill * + **E**
- ___ White-winged Crossbill * + **E**
- ___ Common Redpoll +
- ___ Pine Siskin * +
- ___ American Goldfinch *
- ___ Evening Grosbeak * +

Old World Sparrows

- ___ House Sparrow * **R**

Species reported less than five times are listed below:

Arctic/Pacific Loon
Boreal Owl
Eared Grebe
Chuck-will's-widow
Red-billed Tropicbird
Rufous/Allen's Hummingbird
Magnificent Frigatebird
Acadian Flycatcher
Tricolored (Louisiana) Heron
Willow Flycatcher
Tundra Swan
Say's Phoebe
Greater White-fronted Goose
Ash-throated Flycatcher
Northern Shoveler
Scissor-tailed Flycatcher
Gadwall
Tufted Titmouse
Eurasian Wigeon
Bewick's Wren
Canvasback
Northern Wheatear
Redhead
Townsend's Solitaire

Lesser Scaup
Varied Thrush
Swainson's Hawk
Loggerhead Shrike
Clapper Rail
Yellow-throated Vireo
King Rail
White-eyed Vireo
Sandhill Crane
Black-throated Gray Warbler
Piping Plover
Townsend's Warbler
American Oystercatcher
Yellow-throated Warbler
American Avocet
Cerulean Warbler
Western Sandpiper
Prothonotary Warbler
Baird's Sandpiper
Worm-eating Warbler
Curlew Sandpiper
Louisiana Waterthrush
Stilt Sandpiper
Kentucky Warbler
Buff-breasted Sandpiper
Connecticut Warbler
Long-billed Dowitcher
Hooded Warbler
Marbled Godwit
Western Tanager
Long-tailed Jaeger
Black-headed Grosbeak
Great Skua
Lazuli Bunting
South-Polar Skua
Painted Bunting
Little Gull
Green-tailed Towhee
Lesser Black-backed Gull
Spotted Towhee

Sabine's Gull
Lark Sparrow
Ivory Gull
Lark Bunting
Caspian Tern
Grasshopper Sparrow
Forster's Tern
Le Conte's Sparrow
Sooty Tern
Seaside Sparrow
White-winged Tern
Harris' Sparrow
Black Skimmer
Yellow-headed Blackbird
Barn Owl
Brewer's Blackbird
Great Gray Owl
Bullock's Oriole
Eastern Screech-Owl
Hoary Redpoll

APPENDIX B – WILDLIFE

Approximate Times of Arrival of Spring Migrant Birds

Late March:

Great blue heron
Canada goose
Brant
Common merganser
Kestral
Woodcock
Killdeer
Mourning dove
Horned lark
Crow
Robin
Song sparrow
Tree sparrow
Junco
Fox sparrow
Red winged blackbird
Grackle
Pine siskin
Red crossbill
White winged crossbill
Purple finch

Early April:

Red-throated loon
Pied-billed grebe
Double-crested cormorant
Green-winged teal
Wood duck
Ring-necked duck
Snipe
Red-shouldered hawk
Harrier
Merlin
Peregrine falcon
Osprey
Kingfisher
Flicker

Phoebe
Brown creeper
Winter wren
Hermit thrush
Bluebird
Golden crown kinglet
Pipit
Savannah sparrow
Meadowlark
Cowbird

Late April:

Gannet
Great egret
Bittern
Blue winged teal
Hooded merganser
Broad-wing hawk
Laughing gull
Yellow-bellied sapsucker
Tree swallow
Barn swallow
Brown thrasher
Yellow-rump warbler
Palm warbler
Vesper sparrow
Chipping sparrow
Field sparrow
White-throated sparrow
Swamp sparrow
Goldfinch

First Week of May:

Green heron
Sharp-shinned hawk
Spotted Sandpiper
Solitary Sandpiper
Greater yellowlegs
Chimney swift
Kingbird

Catbird
Veery
Solitary vireo
Nashville warbler
Parula warbler
Black and white warbler
Northern waterthrush
Yellowthroat
Towhee
White-crowned sparrow
Scarlet tanager

Second Week of May:

Leach's petrel
Whip-poor-will
Semi-palmated plover
Common tern
Arctic tern
Roseate tern
Ruby-throated hummingbird
Least flycatcher
Bank swallow
Cliff swallow
House wren
Wood thrush
Black-throated blue warbler
Chestnut-sided warbler
Magnolia warbler
Black-throated green warbler
Yellow warbler
Redstart
Rose-breasted grosbeak
Bobolink
Northern oriole

Third Week to Late May:

Ruddy turnstone
Black-bellied plover
Short-bill dowitcher
Semi-palmate sandpiper
Least sandpiper
Northern phalarope
Parasitic jaeger
Nighthawk
Alder flycatcher
Yellow-bellied flycatcher
Wood pewee
Olive-sided flycatcher
Swainson's thrush
Gray-cheeked thrush
Ruby-crowned kinglet
Cedar waxwing
Red-eyed vireo
Tennessee warbler
Blackburnian warbler
Cape May warbler
Bay-breasted warbler
Blackpoll warbler
Mourning warbler
Canada warbler
Wilson's warbler
Ovenbird
Indigo bunting
Lincoln's sparrow

Early June:

Wilson's petrel
Black-billed cuckoo
Crested flycatcher
Philadelphia vireo
Sharp-tailed sparrow

APPENDIX C

Plants

Plant Communities on Mount Desert Island
Common Plant Checklist for Acadia National Park

APPENDIX C – PLANTS

Plant Communities on Mount Desert Island

The major plant communities within Acadia National Park are:

Forest

Maritime spruce-fir

White pine

Northern hardwood (birch-beech-maple)

Early successional forest (aspen-birch)

Mixed forest (coniferous-hardwood)

Woodland

Pitch pine woodland

Red oak woodland

Aspen-birch woodland

Maritime spruce-fir woodland

White pine woodland

Northern hardwood woodland (birch-beech-maple)

Mixed woodland (coniferous-hardwood)

Black spruce woodland

Shrub

Alder thicket

Dwarf shrub bogs

Scrub shrub

Grasslike

Beach dune

Salt marsh

Wetland meadow

Wetlands

Bog

Fen

Marsh

APPENDIX C – PLANTS

Plant Checklist

This checklist groups the park's most common plants into communities where they are typically found. To identify plants with which you are unfamiliar, consult a field guide or visit the Wild Gardens of Acadia at Sieur de Monts Spring where more than 400 plants are labeled and displayed in their common habitat.

T tree

S shrub

Deciduous Woods

- ___ Ash, white (*Fraxinus americana*) **T**
- ___ Maple, mountain (*Acer spicatum*) **T**
- ___ Aspen, big-toothed (*Populus grandidentata*) **T**
- ___ Maple, red (*Acer rubrum*) **T**
- ___ Aspen, trembling (*Populus tremuloides*) **T**
- ___ Maple, striped (*Acer pensylvanicum*) **T**
- ___ Aster, large-leaved (*Aster macrophyllus*)
- ___ Maple, sugar (*Acer saccharum*) **T**
- ___ Beech, American (*Fagus grandifolia*) **T**
- ___ Mayflower, Canada (*Maianthemum canadense*)
- ___ Birch, paper (*Betula papyrifera*) **T**
- ___ Oak, red (*Quercus rubra*) **T**
- ___ Birch, yellow (*Betula alleghaniensis*) **T**
- ___ Pine, white (*Pinus strobus*) **T**
- ___ Blueberry, low sweet (*Vaccinium angustifolium*) **S**
- ___ Pyrola, round-leaved (*Pyrola americana*)
- ___ Bunchberry (*Cornus canadensis*)
- ___ Sarsaparilla, wild (*Aralia nudicaulis*)
- ___ Bush-honeysuckle (*Diervilla lonicera*) **S**
- ___ Saxifrage, early (*Saxifraga virginensis*)
- ___ Cherry, pin (*Prunus pensylvanica*) **T**
- ___ Shadbush or serviceberry (*Amelanchier* spp.) **T, S**
- ___ Cherry, choke (*Prunus virginiana*) **T**
- ___ Solomon's seal, false (*Maianthemum racemosum*)
- ___ Elder, red-berried or stinking (*Sambucus racemosa* ssp. *pubens*) **S**
- ___ Solomon's seal, small (*Polygonatum pubescens*)
- ___ Fern, Christmas (*Polystichum acrostichoides*)
- ___ Starflower (*Trientalis borealis*)
- ___ Fern, bracken (*Pteridium aquilinum* var. *latiusculum*)

- ___ Twinflower (*Linnaea borealis* ssp. *longiflora*)
- ___ Goldthread (*Coptis trifolia*)
- ___ Twisted stalk, rose (*Streptopus lanceolatus*)
- ___ Hobblebush (*Viburnum lantanoides*) **S**
- ___ Violet (*Viola* spp.)
- ___ Lambkill or sheep laurel (*Kalmia angustifolia*) **S**
- ___ White-cedar, northern (*Thuja occidentalis*) **T**
- ___ Lily, bluebead (*Clintonia borealis*)
- ___ Wintergreen (*Gaultheria procumbens*)

Roadsides and Meadows

- ___ Alder, speckled (*Alnus incana* ssp. *rugosa*) **S**
- ___ Loosetrife, whorled (*Lysimachia quadrifolia*)
- ___ Aspen, big-toothed (*Populus grandidentata*) **T**
- ___ Mayflower, Canada (*Maianthemum canadense*)
- ___ Aspen, trembling (*Populus tremuloides*) **T**
- ___ Meadow-rue, tall (*Thalictrum pubescens*)
- ___ Aster, flat-topped (*Doellingeria umbellata*)
- ___ Meadowsweet (*Spiraea alba* var. *latifolia*) **S**
- ___ Aster, New York (*Symphiotrichum novi-belgii*)
- ___ Milkweed, common (*Asclepias syriaca*)
- ___ Blueberry, low sweet (*Vaccinium angustifolium*) **S**
- ___ Pearly everlasting (*Anaphalis margaritacea*)
- ___ Blue-eyed-grass (*Sisyrinchium montanum* var. *crebrum*)
- ___ Oat grass, poverty (*Danthonia spicata*)
- ___ Bluet (*Houstonia caerulea*)
- ___ Raspberry, red (*Rubus idaeus*)
- ___ Dogbane, spreading (*Apocynum androsaemifolium*)
- ___ Rose, Virginia (*Rosa virginiana*)
- ___ Fireweed (*Epilobium angustifolium*)
- ___ Sarsaparilla, bristly (*Aralia hispida*)
- ___ Goldenrod, gray (*Solidago nemoralis*)
- ___ Sarsaparilla, wild (*Aralia nudicaulis*)
- ___ Goldenrod, rough-stemmed (*Solidago rugosa*)
- ___ Strawberry, wild (*Fragaria virginiana*)
- ___ Hairgrass, common or wavy (*Deschampsia flexuosa*)
- ___ Willow (*Salix* spp.) **S, T**
- ___ Hardhack or steeple-bush (*Spiraea tomentosa*) **S**
- ___ Yellow rattle (*Rhinanthus minor*)

Bogs

- ___ Aster, bog (*Oclemena nemoralis*)
- ___ Laurel, bog (*Kalmia polifolia*) **S**
- ___ Bog rosemary (*Andromeda polifolia* var. *glaucophylla*) **S**
- ___ Lambkill or sheep laurel (*Kalmia angustifolia*) **S**
- ___ Chokeberry, black (*Photinia melanocarpa*) **S**
- ___ Leatherleaf (*Chamaedaphne calyculata*) **S**
- ___ Cotton-grass (*Eriophorum* spp.)
- ___ Maple, red (*Acer rubrum*) **T**
- ___ Cranberry, large (*Vaccinium macrocarpon*) **S**
- ___ Pitcher plant (*Sarracenia purpurea*)
- ___ Cranberry, small (*Vaccinium oxycoccos*) **S**
- ___ Rhodora (*Rhododendron canadense*) **S**
- ___ Crowberry, black (*Empetrum nigrum*) **S**
- ___ Rose, bristly (*Rosa nitida*) **S**
- ___ Goldenrod, northern bog (*Solidago uliginosa*)
- ___ Snowberry, creeping (*Gaultheria hispidula*) **S**
- ___ Huckleberry, dwarf (*Gaylussacia dumosa* var. *bigeloviana*) **S**
- ___ Spruce, black (*Picea mariana*) **T**
- ___ Iris, blueflag (*Iris versicolor*)
- ___ Sundew, round-leaved (*Drosera rotundifolia*)
- ___ Labrador tea (*Rhododendron groenlandicum*) **S**
- ___ Sweet gale (*Myrica gale*) **S**
- ___ Larch, hackmatack or tamarack (*Larix laricina*) **T**

Freshwater Marshes and Ponds

- ___ Arrowhead, common (*Sagittaria latifolia*)
- ___ Rose, swamp (*Rosa palustris*) **S**
- ___ Bladderwort, horned (*Utricularia cornuta*)
- ___ Spatterdock or yellow water-lily (*Nupha lutea* ssp. *variegata*)
- ___ Blueberry, high-bush (*Vaccinium corymbosum*) **S**
- ___ St. Johnswort, marsh (*Triadenum virginicum*)
- ___ Bluejoint, Canada (*Calamagrostis canadensis*)
- ___ Swamp candles (*Lysimachia terrestris*)
- ___ Cat-tail, common (*Typha latifolia*)
- ___ Turtlehead, white (*Chelone glabra*)
- ___ Lobelia, water (*Lobelia dortmanna*)
- ___ Water-lily, fragrant (*Nymphaea odorata*)
- ___ Pickerelweed (*Pontederia cordata*)
- ___ White-cedar, northern (*Thuja occidentalis*) **T**
- ___ Rhodora (*Rhododendron canadense*) **S**
- ___ Winterberry (*Ilex verticillata*) **S**

Coniferous Woods

- ___ Pyrola, one-flowered (*Moneses uniflora*)
- ___ Cranberry, mountain (*Vaccinium vitis-idaea*)
- ___ Sarsaparilla, wild (*Aralia nudicaulis*)
- ___ Dewdrop (*Rubus dalibarda*)
- ___ Shadbush or serviceberry (*Amelanchier* spp.) **S, T**
- ___ Fir, balsam (*Abies balsamea*) **T**
- ___ Shinleaf (*Pyrola elliptica*)
- ___ Woodreed, drooping (*Cinna latifolia*)
- ___ Wood-sorrel, northern (*Oxalis montana*)
- ___ Hemlock, eastern (*Tsuga canadensis*) **T**
- ___ Spruce, red (*Picea rubens*) **T**
- ___ Hobblebush (*Viburnum lantanoides*) **S**
- ___ Spruce, white (*Picea glauca*) **T**
- ___ Lily, bluebead (*Clintonia borealis*)
- ___ Starflower (*Trientalis borealis*)
- ___ Mayflower, Canada (*Maianthemum canadense*)
- ___ Trailing arbutus (*Epigaea repens*)
- ___ Mountain holly (*Nemopanthus mucronatus*) **S**
- ___ Twisted stalk, rose (*Streptopus lanceolatus*)
- ___ Partridgeberry (*Mitchella repens*)
- ___ Wintergreen (*Gaultheria procumbens*)
- ___ Pine, red (*Pinus resinosa*) **T**
- ___ Witherod or wild raisin (*Viburnum nudum* var. *cassinoides*) **S**
- ___ Pine, white (*Pinus strobes*) **T**
- ___ Bunchberry (*Cornus canadensis*)

Mountain Tops and Rocky Places

- ___ Alder, green or mountain (*Alnus viridis* ssp. *crispa*) **S**
- ___ Harebell (*Campanula rotundifolia*)
- ___ Aster (*Aster* spp.)
- ___ Heather, golden (*Hudsonia ericoides*)
- ___ Bearberry (*Arctostaphylos uva-ursi*) **S**
- ___ Holly, mountain (*Nemopanthus mucronatus*) **S**
- ___ Birch, gray (*Betula populifolia*) **T**
- ___ Huckleberry, black (*Gaylussacia baccata*) **S**
- ___ Blueberry, low sweet (*Vaccinium angustifolium*) **S**
- ___ Juniper, common (*Juniperus communis* var. *depressa*) **S**
- ___ blueberry, velvet-leaf (*Vaccinium myrtilloides*) **S**
- ___ Juniper, creeping (*Juniperus horizontalis*) **S**

- ___ Bush-honeysuckle (*Diervilla lonicera*) **S**
- ___ Lambkill or sheep laurel (*Kalmia angustifolia*) **S**
- ___ Cherry, pin (*Prunus pensylvanica*) **T**
- ___ Pine, jack (*Pinus banksiana*) **T**
- ___ chokeberry, black (*Photinia melanocarpa*) **S**
- ___ Pine, pitch (*Pinus rigida*) **T**
- ___ Cinquefoil, three-toothed (*Sibbaldiopsis tridentata*)
- ___ Raspberry, red (*Rubus idaeus*) **S**
- ___ Cranberry, mountain (*Vaccinium vitis-idaea*) **S**
- ___ Rose, Virginia (*Rosa virginiana*) **S**
- ___ Crowberry, black (*Empetrum nigrum*) **S**
- ___ Sandwort, mountain (*Minuartia groenlandica*)
- ___ Fern, bracken (*Pteridium aquilinum* var. *latiusculum*)
- ___ Sarsaparilla, bristly (*Aralia hispida*)
- ___ Goldenrod, Rand's (*Solidago simplex* ssp. *randii*)
- ___ Sweetfern (*Comptonia peregrina*) **S**
- ___ Oatgrass, poverty (*Danthonia spicata*)
- ___ Witherod or wild raisin (*Viburnum nudum* var. *cassinoides*) **S**

APPENDIX D

Land

Glacial Geology and Glossary

Geologic Formations

Wetlands

Lakes and Ponds

Mountains

Glacial Geology and Glossary

THE NATURE OF GLACIERS

Below are a few explanations that may help pull together some loose ends and clarify Acadia's story of glacial geology.

- A glacial cycle lasts approximately 100,000 years: 85,000 of which involves ice and 10-15,000 of which is interglacial. It has been suggested that we are approximately 10,000 years into an interglacial period. There is approximately 3-6 degree difference in temperature between the height of an ice age and the height of an interglacial period. (It is speculated that if there is a current greenhouse effect, the average temperature of the earth could be raised by 5 degrees centigrade. A discussion regarding ways in which the greenhouse effect might affect the environment in the next 2000, 5000, and 10,000 years could be interesting.)
- It is also estimated that there have been approximately 20-30 glacial advances in the past 2-3 million years. Land forms we see today are the cumulative effect of all glaciers.
- The ice thickness of the most recent glacier in the area of Acadia is debated. Because Mount Desert Island was near the edge of the ice sheet, ice thickness is noted to be thinner. It has been suggested that ice may have been at least 200 feet (62 m) thick on Cadillac Mountain, and it has also been suggested that ice was 3000 feet (925 m) on Cadillac Mountain. Some geologists speculate that there may never have been ice as thick as 9000 feet (2770 m) anywhere in the United States. Arguments, however, are for thinner ice everywhere on the North American continent.
- Land may have been compressed one foot for every three feet of ice pushing down on it. This and glacial melting account for the shoreline features at elevations approximately 220 feet above present sea level. As the earth's crust was freed from the ice burden, it began to rebound. Today, sea level continues to rise at a suggested rate of 2 inches (5 cm) per century.

THE CHANGING FACE OF ACADIA

- 20,000 years ago: Rugged highlands running in an east-west direction on Mount Desert Island.
- 17,000 years ago: Huge tongues of ice invaded valleys, and eventually engulfed the mountains on the way to the sea.
- 15,000 years ago: Acadia's ice sheet reached its maximum. The sheet extended 150-200 miles (240 km - 320 km) seaward to the edge of the continental shelf.
- 13,500 years ago: Climatic warming caused ice to melt back to the north. Ocean waters rose, flooding the foothills of Mt. Desert Island.
- 10,000 years ago: The ice changed the shape of Acadia. It cut deep U-shaped valleys running north-south, and rounded and polished the mountain tops.

PARTIAL GLOSSARY OF TERMS

(Reprinted with permission of the Maine Geological Survey.)

A complete glossary of geologic terms can be found in *The Geology of Mount Desert Island: A Visitor's Guide to the Geology of Acadia National Park*. This book is available from the Acadia Teacher Resource Library.

Abrasion: The grinding or wearing away of rock surfaces caused by the scraping action of rock fragments frozen into the base of a glacier.

Alpine Glacier: A medium to small glacier that forms in a mountain range and flows down valleys.

Chatter Marks: Arc-shaped fractures produced by pressure of glacial ice on boulders embedded in the base of the glacier.

Continental Glacier: A glacial ice sheet of considerable thickness which covers a sizeable portion of a continent and obscures most of the underlying terrain. The modern Antarctic ice sheet is a good example.

End Moraine: Ridges made of sand, gravel, and/or silt and clay that formed at the margin of a glacier.

Erratic: A glacially-transported rock that has been deposited some distance away from its point of origin and now rests on bedrock of a different type.

Rebound: The rise of the earth's crust in response to the removal of substantial thickness (and weight) of ice.

Striations: Parallel grooves on bedrock surfaces produced by the abrasive action of rock fragments frozen in the base of an actively moving glacier.

Geologic Formations

The principal bedrock formations on Mount Desert Island include:

Granite: the primary igneous rock of Acadia National Park's mountains formed from magma plugs embedded deep in the country rock beneath the surface of the Earth during the collision of tectonic plates nearly 400 million years ago. As plugs solidified different minerals formed (like feldspar, hornblende); later intrusions of quartz, feldspar, hornblende, and other minerals occurred in granite's cracks and crevices after plugs solidified.

Ellsworth Schist: the oldest rock exposed on Mount Desert Island (seen, for example, at Thompson Island), a gray layered rock laid down as mud on the sea floor over 500 million years ago, then heated during the collision of tectonic plates and altered to its current form. It is metamorphic.

Bar Harbor Formation: another sedimentary rock formation, originally laid down as silt and sand under the sea, then transformed by heat and pressure into the rocks we see today along the Shore Path in Bar Harbor.

Gabbro-diorite: rich in iron, magnesium, and calcium, gabbro and diorite are two different rocks often associated together. Older than granite, gabbro-diorite formations intruded into the country rock as granite did later. This rock can be seen along Route 3 west of Salisbury Cove and on Great Head in Acadia National Park.

Cranberry Island Series: originating in volcanic eruptions that deposited light gray and blue-gray layers of debris that settled on the sea floor. An example of an extrusive igneous rock.

Shatter Zone: a mixture of older rock in a matrix of granite, seen on Otter Point or at the eastern end of Sand Beach in Acadia National Park.

Diabase Dikes: fine-grained black rock forced upward through fractures in older formations. Diabase, basalt, and gabbro are similar in composition but formed differently, basalt erupting onto the surface, diabase cooling underground, and gabbros lying deeper still. Many of the hiking trails in Acadia National Park cross diabase dikes that are only a few inches to many feet wide. Dikes are particularly prominent in the granite at Schoodic Point.

APPENDIX D – LAND

Wetlands

Reflecting their need for water during the growing season, certain species of plants serve as indicators to the availability of water in the freshwater wetlands in which they thrive.

Indicator Species in Acadia's Freshwater Wetlands

Permanently Flooded Wetlands: white water lily, spatterdock, pondweeds, floating heart

Semi-permanently Flooded Wetlands: bur reeds, bayonet rush, pickerelweed, common arrowhead, common pipewort

Seasonally Flooded Wetlands: cattail, tussock sedge, marsh fern, mountain holly, wild raisin, red maple

Wetlands with Seasonally Saturated Soils: pitcher plant, white beak rush, leather leaf, sphagnum moss

Freshwater wetlands provide habitat for three groups of plants and wildlife:

(1) upland species that can tolerate wetland conditions including white pine, white-tailed deer, garter snakes, as well as frog and salamander species that breed in flooded wetlands in spring; (2) aquatic species including mummichogs, snapping turtles, otters, and water striders that can survive in wetland pools; and (3) species that live predominantly in wetlands including cattails, muskrat, beaver, and pickerel frogs.

APPENDIX D – LAND

Lakes and Ponds

MAXIMUM DEPTH

Sargent Pond – 14’

The Bowl – 29’

Bubble Pond – 39’

Eagle Lake – 110’

Jordan Pond – 150’

Lower Breakneck Pond – 21’

Upper Breakneck Pond – 12’

Upper Hadlock Pond – 37’

Aunt Betty Pond – 7’

Lower Hadlock Pond – 40’

Witch Hole Pond – 33’

Beaver Dam Pond – 13’

The Tarn – 5’

Echo Lake – 66’

Round Pond – 19’

Long Pond – 113’

Hodgdon Pond – 22’

Seal Cove Pond – 44’

Lake Wood – 11’

Halfmoon – 20’

Great Ponds (10 acres or larger) within Acadia National Park are: Aunt Betty, Bubble, Eagle, Jordan, Lower Hadlock, Upper Hadlock, Witch Hole, Round Pond, Lake Wood. Great Ponds bordering Acadia National Park are: Echo, Hodgdon, Seal Cove, Long (Mount Desert Island) and Long (Isle au Haut).

The park has established a long-term water monitoring program for freshwater resources focusing on impacts from atmospheric deposition and cultural eutrophication.

APPENDIX D – LAND

Mountains

There are 26 mountains in Acadia National Park:

Cadillac (formerly Green) – 1,530’
Sargent – 1,373’
Dorr (formerly Flying Squadron and Dry) – 1,270’
Pemetic – 1,248’
Penobscot (formerly Jordan) – 1,194’
Bernard of Western – 1,071’
Champlain (formerly Newport) – 1,058’
Gilmore – 1,036’
Bald – 974’
Mansell of Western – 949’
Cedar Swamp – 942’
Parkman (formerly Little Brown) – 941’
North Bubble – 872’
Norumbega (formerly Brown) – 852’
Beech – 839’
South Bubble – 766’
Huguenot Head (formerly Picket) – 731’
McFarland – 724’
The Triad – 698’
Acadia (formerly Robinson) – 681’
Youngs – 680’
St. Sauveur (formerly Dog) – 679’
Day – 580’
Gorham – 525’
The Beehive – 520’
Flying – 284’

From October 7 to March 6 Cadillac Mountain is the first place in the United States where you can see the sun rise. Cadillac Mountain is the only mountain in Acadia National Park with an auto road to the summit.

APPENDIX E

History

Acadia National Park Timeline

Who's Who at Acadia

Quotes

APPENDIX E – HISTORY

Acadia National Park Historical Timeline

3000 BC–1900

Although deep shellheaps testify to Indian encampments dating back 5000 years in Acadia National Park, prehistoric records are scanty. The first written description of Maine coast Indians, recorded 100 years after European trade contacts began, describe American Indians. Members of the Wabanaki tribe, the Penobscot and Passamaquoddy lived in this area.

1524

Giovanni Verazzano, an Italian navigator for the French crown sailed along the North American coast, placing the name “Arcadia” on areas between New Jersey and North Carolina. Map makers later mistakenly placed that title between the 40th and 46th parallel (between present-day Philadelphia and beyond Montreal).

1604–1605

Pierre Dugua, sieur de Mons, after being granted authority from King Henry IV of France over all of North America from 40th-46th parallel, set sail with his navigator Samuel Champlain, and established the settlement of St. Croix on an island along today’s Maine-Canadian border. While on a scouting mission along the coast, he wrote about the island he named “Isle de Monts Deserts.”

1613

Records indicate that it may have been at Fernald Point in the mouth of Somes Sound where a group of French Jesuits, dispatched by Madame de Guerchville of France, established the settlement of Saint Sauveur. The settlement was short-lived, falling to the British. For the next 150 years, both the British and French would claim this region of North America for their own.

1622

The English lay claim to Mount Desert Island when Sir Robert Mansell, Vice Admiral of His Majesty’s Navy, purchased the island.

1688

Self proclaimed nobleman, Antoine Lamuet, Sieur de la Mothe Cadillac, received a huge land grant from the French Crown including Mount Desert Island. After visiting here, he went on to found the present-day city of Detroit. Yes, there is a connection between the car and the nobleman!

1759

The French and Indian Wars ended after nearly a century and a half of conflict. British troops triumphed at Quebec, ending French dominion in the Acadia region.

1760

King George III of England gave Francis Bernard, the last British governor of Massachusetts, a royal land grant on Mount Desert Island.

1761

Bernard offered free land to Abraham Somes and James Richardson who settled their families at what is now Somesville.

1790

Census records indicate that 800 settlers lived on Mount Desert Island.

1820

Census records indicate that 1300 settlers lived on Mount Desert Island. Farming and lumbering vied with fishing and shipbuilding as major occupations.

1840

First steamship wharf at Clark's Point in Southwest Harbor.

1860s–1870s

Artists and journalists begin to visit Mount Desert Island, depicting the beauty of the island in both paintings and prose. Two of the most famous artists, Frederic Church and Thomas Cole of the Hudson River School spent summers here. The presence of these visitors issued in the age of the rusticators on the island, as farmers and fishermen opened their homes to accommodate them.

1870

The entire first growth of forest had been removed from Mount Desert Island. Quarrying operations for the beautiful pink granite began at Hall Quarry on the west side of the island.

1880s

Hotels begin springing up on the island to accommodate the influx of visitors. Seventeen hotels were in Bar Harbor, with many others in Seal Harbor, Northeast Harbor, and Southwest Harbor.

1880s–1900s

The wealthy make Mount Desert Island, in particular the eastern side, a playground. Multi-room mansions called “cottages” are built, and Bar Harbor replaces Newport, Rhode Island, as the fashionable capitol of where to “summer.”

1901

The Hancock County Trustees of Public Reservations is formed by Charles Eliot, George B. Dorr, and a handful of other summer residents who became concerned with the rapid development of Mount Desert Island. Their goal was to begin protecting land in its natural state.

1913

The Trustees, having acquired 5000 acres, turn to the federal government to create a national park on Mount Desert Island. It marks the beginning of George B. Dorr’s many visits to Washington DC to advocate for the formation of the park.

1913–1940s

John D. Rockefeller begins building carriage roads. Once the park is established, he donates land parcels with carriage roads in place, resulting in over 11,000 acres of land and 51 total miles of carriage roads (45 in the park).

1916

President Woodrow Wilson announces the creation of Sieur de Monts National Monument. George B. Dorr is the first superintendent. Original charter dictates that lands are only to be donated, not purchased with federal funds.

1919

Sieur de Monts National Monument becomes Lafayette National Park, the first national park east of the Mississippi.

1929

Schoodic Peninsula is donated to the park. Name is changed to Acadia National Park.

1930s–1940s

Decline of the cottage era. The income tax, World War I, and the Depression take away much of the unbridled wealth of many summer residents. Cottages begin to be boarded up or razed.

1947

Over 17,000 acres burned on the eastern side of Mount Desert Island, 11,000 of which were in the park.

1990s

Park's final boundary legislation directs park to purchase or land swap for parcels of specific land critical to protect. Once these parcels are acquired, no more lands will be added to the park, either by donation or purchase. Park begins to take on conservation easements by private landowners.

National parks become more important in the national eye as not only a place for recreation and respite, but critical for research and to use as indicators of environmental problems. Acadia National Park is a crucial barometer of environmental degradation such as air quality, declining amphibian populations, endangered species, and more.

Today

Over three million visitors a year enjoy Acadia National Park, thanks in part to all of the hard work, dedication, and foresight of those that came before.

APPENDIX E – HISTORY

Who's Who at Acadia

Giovanni de Verazzano: An Italian navigator sailing for France in 1524, Verazzano sailed along the eastern seaboard of present day Northeast and mid-Atlantic states. A cartographer's error placed Arcadia, the name Verazzano called some places along the shoreline of Virginia and North Carolina, to the region between present-day Philadelphia and Canada.

Pierre Dugua sieur de Mons: A French nobleman commissioned as Lieutenant Governor of New France by King Henry IV in 1603. As Lieutenant Governor, de Mons gained authority over all North America between the 40th and 46th parallels, from present-day Philadelphia to Montreal. Sieur de Mons, his navigator Samuel Champlain, and his crew sailed to the New World in 1604, establishing an ill-fated French settlement on the Maine-Canada border at St. Croix.

Samuel Champlain: In September of 1604, Samuel Champlain, navigator for Sieur de Mons, set sail southward from the settlement of St. Croix in the mouth of the St. Croix River separating present day Maine and Canada. Along with 12 soldiers and two Indians, Champlain scouted the indented coast. The sight of a large island with several prominent rounded mountains prompted Champlain to note the island in his journal calling it the “Isles des Monts Deserts.”

The Wabanaki: The native peoples of eastern and coastal Maine, Prince Edward Island, New Brunswick, and Nova Scotia. Consisting of four tribes, the Penobscot, the Passamaquoddy, the Micmac, and the Maliseet, their population was estimated around 32,000 before European arrival. Because of European-introduced diseases, 75% of tribal members died in the early 1600s. The Penobscot and Passamaquoddy tribes lived in the Acadia region.

Madame de Guerchville and Jesuit colonies: A French supporter of the Jesuits, Guerchville purchased Sieur de Mons land grant with the intention of settling Jesuit colonies in New France. A group of Jesuits from the Port Royal colony in present-day Canada were believed to have settled in the mouth of Somes Sound. The colony, established in 1613, and named St. Sauveur was short-lived, destroyed by the English.

Antoine Lamuet, Sieur de la Mothe Cadillac: A self-proclaimed French nobleman, Cadillac received a land grant of Mount Desert Island from King Louis XIV in 1688. An experienced navigator and cartographer, Cadillac's relevance to the area included practical nautical and land descriptions around the Mount Desert Island area. He did not stay long on the island, and went on to found Detroit.

Governor Francis Bernard: The last colonial governor of Boston in the mid 1700s before independence from Britain was gained. He encouraged settlers on Mount Desert Island, which he acquired in 1759 as a re-payment for personal monies he used on the governor's mansion in Boston

Abraham Somes and James Richardson: Considered Mount Desert Island's first permanent white settlers, establishing homes at the end of Somes Sound in 1761. "Betwixt the Hills" would later become Somesville.

The Hudson River School: In the mid 1800s, this school for 19th century artists generated paintings of panoramic views, sunrises, and sunsets. Elements of humanity, such as Native Americans, frontiersmen, or farms, were often part of the scenes. Influenced by European theories of nature as an overwhelming power and hallowed ground reflecting the hand of God, many paintings captured a quickly changing landscape and served as travel posters for those interested in visiting scenic places like Mount Desert Island.

Thomas Cole: The leader of the Hudson River School, Cole visited Mount Desert Island in 1844. Fascinated by the landscape, he painted numerous scenes all with an ethereal quality to them depicting the splendor of mountains, forests, lakes, and sea.

Frederic Church: A student of Thomas Cole, his many visits here in the mid 1800s resulted in paintings depicting the island's essence. He named some of the island's prominent features such as Eagle Lake and the Beehive. Other names such as Lake Silence for Echo Lake are no longer used. More paintings of the island were done by Church than Cole.

Charles W. Eliot: President of Harvard and a regular summer resident of Mount Desert Island, it was Eliot who began the Hancock County Trustees of Public Reservations in 1901 whose sole purpose was to "acquire, by devise, gift or purchase, and to own, arrange, hold, maintain, or improve for public use lands in Hancock County, Maine, which by reason of scenic beauty, historical interest, sanitary advantage or other like reasons may become available for such purpose."

George Bucknam Dorr: A wealthy Boston native whose family fortune came from the textile trade with the West Indies. A great lover of Mount Desert Island, Dorr is considered the Father of Acadia. A member of the Hancock County Trustees of Public Reservations, it was primarily Dorr in the forefront who championed a national park on Mount Desert Island. Upon its inception into the National Park System in 1916, Dorr became superintendent with a salary of \$1.00 a year. By the time he died, he had spent his entire family fortune, much of it on the growth of Acadia National Park.

William Otis Sawtelle: Founder of the Islesford Historic Museum, Sawtelle was a physics professor at Haverford College in Pennsylvania. Like some other summer residents of the time, Sawtelle's fascination with the maritime history prompted him to work towards its preservation. Having purchased the old Islesford Market in 1928, once the Hadlock Ship Store, he used this to begin showing collected artifacts. Eventually the fire-safe brick Islesford Historical Museum was built to house the collection.

John D. Rockefeller, Jr.: A summer resident of Seal Harbor and the son of wealthy oil tycoon, Rockefeller Jr.'s deep appreciation for Mount Desert Island coupled with his love of the horse and carriage resulted in a remarkable system of carriage roads. Rockefeller's legacy to the park not only includes the carriage roads but also 11,000 acres of land and partial financing of the Park Loop Road. Other national park beneficiaries include the Blue Ridge Parkway, Shenandoah, Grand Tetons, Virgin Island National Park, and Mesa Verde among others.

APPENDIX E – HISTORY

Quotes

EXPLORERS

“It is very high, and notched in places, so that there is the appearance to one at sea, as of seven or eight mountains extending along near each other. The summit of most of them is destitute of trees, as there are only rocks on them. The woods consist of pines, firs, and birches only. I named it Isles des Monts Deserts.”

—*Samuel Champlain, 1604*

WABANAKI

“I should consider these Indians incomparably more fortunate than ourselves: for, after all, their lives are not vexed by a thousand annoyances as are ours.”

—*Father Christian Le Clerq, a Jesuit priest, early 1600s*

WRITERS DURING RUSTICATOR ERA

“These mountains are the bones of the earth, which, being broken and upheaved, form some of our most striking and beautiful scenery, giving us lovely valleys, wild mountain passes and sparkling freshwater lakes, within the sound of the murmuring sea.”

—*Travel writer Benjamin De Costa, “Rambles in Mount Desert,” 1842*

ARTISTS DURING RUSTICATOR ERA

“Yankee enterprise has little sympathy with the picturesque and it behooves our artists to rescue from its grasp the little that is left before it is forever too late. This is their mission.”

—*Thomas Cole, head of Hudson River School, 1844*

“This is a very grand scene—the craggy mountains, the dark pond of dark brown water—the golden sea sand of the beach and the light green sea with its surf altogether with the woods of varied color- make a magnificent effect such as is seldom seen combined in one scene.”

—*Thomas Cole on Sand Beach and Beehive*

HOTEL ERA

“There is a vigorous, sensible, healthy feeling in all they do, and not a bit of that overdressed, pretentious, non-sensical, unhealthy sentimentality which may be found at other places.”

—*George Ward Nichols, “Mount Desert Harpers Magazine,” August 1872*

COTTAGE ERA

“The following groups have come to the social resorts in this order: First, artists and writers in search of good scenery and solitude; second, professors and clergymen and other so called solid people with long vacations in search of the simple life; third “nice millionaires” in search of a good place for their children to lead the simple life (as lived by the “solid people”); fourth, “naughty millionaires” who wished to associate socially with “nice millionaires” but who built million dollar cottages and million dollar clubs, dressed up for dinner, gave balls and utterly destroyed the simple life; and fifth, trouble.”

—*Cleveland Amory—The Last Resorts, 1952, reference to early 1900s social resorts*

THE BEGINNINGS OF A NATIONAL PARK

“Scenically, its impressive headlands give Mount Desert the distinction of combining sea and mountain... Back of the shore is a mountain and lake wilderness which is typical in a remarkable degree of the range of Appalachian scenery... There are few spots, if any, which can combine the variety and luxuriance of the eastern forests in such small compass. The rocks have their distinction... worn by the ice sheets of the glacial period, eroded by the frosts and rains of the ages, their bases carved by the sea, their surfaces painted by the mosses and lichens of today, they are exhibits of scientific interest as well as beauty. Still another distinction is Mount Desert’s wealth of bird life. All the conditions for a bird sanctuary in the east seem to be here fulfilled.”

—*Franklin K. Lane, 1918, Secretary of Interior on why this should be a National Park*

ON CARRIAGE ROADS AND JOHN D. ROCKEFELLER, JR.

“He built and maintained a carriage road system (motors prohibited) that gives one who travels over it, or one of the loops that make up the system—a great experience—an experience that presents to the traveler all that Acadia Park has to offer—its woods, its lakes, the grand views, the intimate views, the ocean, the mountains, etc.”

“He knows intimately the physical geography and the beauties of Mount Desert Island, its hills, its shoreline, its streams, its woods, where the fine views are—where autumn colors are best, etc. Few people know the lay of the land and its interesting details as well as he.”

“The carriage roads in Acadia National Park will one day get the recognition they deserve—through use by the public, if not by carriages, by saddle horse, bicycle or by foot. They will be much used and not by the automobile.”

—*Thomas Vint, 4/26/55, Chief, Division of Design and Construction, NPS, to Horace Albright, Director*

APPENDIX F

Other Features In and around Acadia National Park

Carriage Road Bridges

Lighthouses

Mount Desert Island Towns

Museums in the Mount Desert Island Area

Carriage Road Bridges

Sixteen carriage road bridges occur at various points where there is either a ravine or motor route to be crossed. Each bridge is a beautifully executed work, entirely constructed from hand-hewn local granite. They each have artfully conceived and individual design features that blend harmoniously with their surroundings and that, in many cases, take advantage of natural waterfalls, site contours and great heights to enhance the drama of the landscape. Frequently small viewer's platforms were designed into the bridges so that both the view and the handiwork of the bridge may be admired. Unless otherwise noted, most bridges have a substructure of stone and mortar, are faced with quarry-faced random laid granite ashlar, and a two lane gravel deck.

DEFINITIONS

Ashlar: rectangular blocks (in this case—granite) with no set dimensions

Voussoirs: stones creating the decorative arch of the bridge

Coping Stones: creating the top rail

Abutments: side walls or pillars of bridge built into the landscape

Capstone: top rock on abutments of the bridge deck

Bridges in the Jordan Pond Area

Jordan Pond Bridge: Completed in 1920, this compact 40 foot length bridge has a 20 foot single segment arch span. The bridge marks the meshing of Jordan Pond and Jordan Stream's waters. Its arched gravel deck is flared at either end. Its surface blocks are laid both random and polygonal between the radiating voussoirs of the arch and the orderly coping stones of the gently arched rail. The abutments are square, solid masses surfaced in random ashlar with a flattened pyramidal capstone.

West Branch Bridge: The 170-foot structure has a flared approach as it curves sharply over the ravine formed by Jordan Stream. It has a small 6 foot stone arch span. The stone and mortar substructure is very simply clad in quarry-faced random laid ashlar and lacks even copings on its side railings. It was built in 1931.

Cobblestone Bridge: This bridge spanning Jordan Stream was the first bridge built on the carriage road system in 1917. William Welles Bosworth, an architect who had previously been employed by Frederick Law Olmstead, Sr. designed this bridge. However, it was carriage road engineer, Charles Simpson—not Bosworth—who suggested the use of rounded boulders for the facing. John D. Rockefeller, Jr. agreed that the rounded boulders would lend a more natural appearance to the bridge than cut stone work. The cobblestone bridge is unique. No other bridge on the carriage road system has boulder facing.

Stanley Brook Bridge: The triple-arched Stanley Brook Bridge was built in 1933. The main arch spans the Stanley Brook road which connects Seal Harbor Beach to Jordan Pond. The two smaller arches cross Stanley Brook on one side and the Seaside Path on the other. The long deck carries a carriage road.

Jordan Pond Road Bridge: One of the last bridges built in 1932, this bridge is not easily noticed even when traveling over it. It carries an automobile road from Seal Harbor to Jordan Pond across its deck, a carriage road running beneath it.

Bridges in the Penobscot Mountain and Sargent Mountain Area

Deer Brook Bridge: Completed in 1925, this 140 foot long bridge soars high above its namesake near Jordan Cliffs. The two-rounded arches are tall, narrow 8-foot spans, separated by a delicate pier and outlined by slender radiating voussoirs. The entire stone and mortar substructure is clad in quarry-faced random laid ashlar. Set into the spandrel of the arches is a plain, circular medallion into which has been carved the year "1925."

Chasm Brook Bridge: The Chasm Brook Bridge, completed in 1927, is a rustic and small-scaled bridge with a 20 foot span over Chasm Brook. It is faced with random laid ashlar as are the long, slender, radiating voussoirs, the keystone, and the railing copings. The two-lane, gravel-surfaced deck is handsomely flared and terminates at pairs of rounded abutments which form pedestals for their gently peaked caps.

Bridges in the Parkman Mountain/Upper Hadlock Pond Area

Hemlock Bridge: Built in 1925, this massive Gothic-arched structure crosses Maple Spring Brook. Its 185 foot wall curves back sharply and flares at either end. The Gothic arch span is 30 feet across and is sharply outlined in radiating voussoirs.

Waterfall Bridge: Another 1925 bridge, the Waterfall Bridge spans Hadlock Brook. It is 125 feet in length and flares gently at the ends. The 20 foot span of its rounded arch is outlined by a firm row of radiating voussoirs. Random laid ashlar cover the substructure and bold blocks of the same material form the railing copings. A pair of semi-circular viewing platforms jut out on either side to take advantage of the view.

Hadlock Bridge: The Hadlock Brook Bridge, completed in 1926, is a small-scaled 40 foot bridge with a 20 foot span segmental arch. The rail of the bridge follows the line of the arch and flares out gently at either end. There are strong abutments with chinked rounded capstones. The stone and masonry substructure is clad in very rough, quarry-faced ashlar, laid random. The radiating voussoirs and rail copings are similar in texture.

Bridges around Eagle Lake/Witch Hole Pond Area

Eagle Lake Bridge: The carriage road passes underneath the Gothic-arched Eagle Lake Bridge which carries State Route 233 above. It was built in 1927 and is 118 feet in length. The refined Gothic arch spans 30 feet. The arch is outlined in radiating voussoirs of the random-laid ashlar. This bridge was the object of a 1974 widening project that expanded the upper deck to accommodate State Route 233 traffic. The project received engineering awards for the division, the separation move made on a system of ball bearings, and the excellent re-seaming with the newly added masonry.

Duck Brook Bridge: The Duck Brook Bridge is a spectacular, three-arch structure over Duck Brook. Completed in 1929, there is a central 30-foot span flanked by smaller 20 foot spans, each of which has rough-dressed uneven radiating voussoirs with prominent keystones. The gravel-surfaced deck is 200 feet in length and flares at either end. The railing has dressed ashlar copings and there are pairs of rectangular openings piercing the railing above the lesser arches and three pairs above the main arch. Above the spandrels of the arches, corbelled and semi-circular balconies extend off from the deck to allow the traveler to enjoy the scenery from excellent vantage points.

Bridges around Bubble Pond Area

Bubble Pond Bridge: Completed in 1928, this is an elliptical-arched structure rustic in detail. The 30-foot span is echoed in the railing arch which slopes outward beyond the opening to a more horizontal place. The deck is a full 200 feet in length and flares gently at the end. The stone and mortar substructure are surfaced in rough-dressed random laid rubblestone. The uneven and rough-dressed radiating voussoirs form the graceful arch and the keystone block has been carved with the year "1928." The rail copings, too, are rough-dressed and jaggedly set, but still provide a strong horizontal element in this bridge's distinctive profile.

Bridges around Amphitheatre Area

Little Harbor Brook: This small single round arch bridge, built in 1919, crosses over Little Harbor Brook. The bridge is 40 feet long and has a main span twenty feet long and a deck twenty feet wide.

Amphitheatre Bridge: Built in 1928, this bridge is a long, 236 foot structure that traverses the deep Amphitheatre ravine. The deck flares broadly at either end. The 50-foot rounded arch span is constructed of rough-dressed, uneven radiating voussoirs and has a prominent keystone. The surface, in addition to the random-laid ashlar, incorporates large projecting blocks set in several discontinuous vertical rows. The rail copings are of heavy, rectangular blocks of rough-dressed granite with beveled edges and with a gently peaked stone in the center. The rows of ashlar are

not completed to their outer edges and this stepped motif, together with the continuous railing coping, creates a series of triangular openings piercing the wall.

Cliffside Bridge: This 232-foot-long structure built in 1932 resembles a medieval battlement curving out over a vast ravine. The 50 foot span segmental arch has a row of slender and tall radiating voussoirs. On either side of the arch are massive bayed abutments, battered at the base, which at the bridge deck become viewer's platforms. The railing of the bridge is crenulated by the upright placement of massive hand-hewn boulders at regular intervals. The viewers' platforms have the same ponderous crenellation, as well as finely dressed stone chutes set in the masonry to drain water from the structure.

Area Lighthouses

Of the 65 lighthouses in Maine four are in the immediate Mount Desert Island area.

Egg Rock Lighthouse: Located in the mouth of Frenchman Bay on a thin strip of rock ledge, the 40 foot white tower was built in 1875. Visible from the Park Loop Road, the fog horn from this lighthouse is often heard in Bar Harbor.

Baker Island Lighthouse: On Baker Island, seven miles out to sea, is the oldest light in the area. Built in 1828, its first lighthouse keeper was William Gilley who had settled on Baker Island with his family some 20 years earlier. It is accessible via boat to Baker Island and then a short hike to the island's eastern side where the light is located.

Bear Island Lighthouse: Just outside the mouth of Northeast Harbor, Bear Island Light perches atop this small island's steep southern cliff. It was built in 1839, rebuilt in 1889, and included a fog bell rung during low visibility. Bear Island Light can be viewed on boat cruises from Northeast Harbor.

Bass Harbor Lighthouse: Built in 1858, this lighthouse was a necessity to guide seafarers around the shallow Bass Harbor Bar into the eastern entrance to Bass Harbor. It also marks the entrance into Blue Hill Bay. In 1876 a fog bell and tower were added. It is one of the most scenic and accessible lighthouses in the area. It can be reached off of State Route 102A. The keeper's house currently serves as Coast Guard housing.

Towns of Mount Desert Island

Island's East-Side Towns

Northeast Harbor: This small community is nestled along a narrow harbor dotted with more yachts than fishing boats. Two outstanding public gardens are found in Northeast Harbor. The Azalea Gardens, spectacular in June, are beautiful during any month. Thuya Gardens sits atop a cliff and is accessed either by trail (located across from the Asticou Inn) or by the garden's drive. The Asticou Inn (along with the Claremont Hotel in Southwest Harbor) is an original hotel from the hotel era in the late 1800s. Access to the Cranberry Islands is from the mailboat which operates from Northeast Harbor's marina.

Seal Harbor: A post office, gas station, small store, and a restaurant mark the main street of Seal Harbor. This first glance doesn't convey the fact that Seal Harbor is host to many massive "cottages." Hidden in the coniferous woods along the rocky cliffs of the town are many mansions. Seal Harbor beach is a favorite spot for sunning and swimming in the summer.

Bar Harbor: The largest community on the island, Bar Harbor is filled to the brim with visitors during the summer months. Restaurants, shops, outfitters, hotels, and boat cruises can all be found here. A visit in January provides quite a contrast—boarded up windows, a few cars, and the occasional visitor show Bar Harbor's winter face!

Island's West Side Towns

Somesville: Somesville's character, created by quaint clapboard houses and steeped church, is enhanced by the island's mountains and Somes Sound. Known as "Betwixt the Hills" when it was first settled in 1761, the name Somesville came from its homesteading founder, Abraham Somes. Today visitors may stroll the sidewalks of this village listed on the Register of National Historic Places.

Southwest Harbor: The first people known to have been on Mount Desert Island were, according to recent archaeological excavations, prehistoric native tribes that inhabited Fernald Point on Somes Sound, just to the north of Southwest Harbor, 3,000 years ago. The more recent Wabanaki, the people first encountered by European explorers to this area, also inhabited this site. Surprising to some, it was Southwest Harbor and not Bar Harbor that first hosted visitors. The island's first steamship dock at Clark Point welcomed city-dwelling rusticators ready to experience this mountainous island in the 1840s. Today, Southwest Harbor is home to the United States Coast Guard and numerous boat building industries.

Bass Harbor and Bernard: If one is looking for a classic Maine coast fishing village, Bass Harbor and its sister community, Bernard, across the harbor will satisfy! Lobster boats, lobster traps, and industrious fishermen define these two communities. Ferry service to Swans Island, the second largest island off the Maine coast, leaves from Bass Harbor. The island is perfect for exploring by bicycle.

APPENDIX F – OTHER FEATURES IN AND AROUND ACADIA NATIONAL PARK

Museums in the Mount Desert Island Area

George B. Dorr Museum of Natural History

College of the Atlantic, Bar Harbor

The museum investigates and interprets the natural history of Maine through a human ecological perspective. Detailed exhibits depict the animal and plant life of Maine. (207) 288-5395/www.coa.edu/nhm

Abbe Museum

Downtown Bar Harbor

The Museum celebrates Maine's Native American heritage. A permanent exhibition "Wabanaki: People of the Dawn," as well as changing exhibitions and educational programs engage visitors of all ages. (207) 288-3519/www.abbemuseum.org

Bar Harbor Historical Society

Downtown Bar Harbor

The Society holds an outstanding collection extending from Bar Harbor's 1796 incorporation through the Gilded Era to the present. (207) 288-0000 or 288-3807/www.barharborhistorical.org

Sieur de Monts Springs Nature Center

Located in Acadia National Park off State Route 3

Explores the plant and animal life of the park. Discover how its diverse resources are managed by park scientists. (207) 288-3338/www.nps.gov/acad/home.html

Abbe Museum at Sieur de Monts Spring

Located in Acadia National Park off State Route 3

A visit to the original Abbe Museum is a step back in time. It features exhibits on the archeology of Maine and the history of the museum. (207) 288-3519/www.abbemusuem.org

Sound School House Museum

State Route 198

Built in 1892, the MDI Historical Society restored the building in 1999. In the summer, rotating exhibits focus on the cultural history of Mount Desert Island and in the winter the experience of a 19th century school is recreated. The museum also has a research library. (207) 276-9323/www.ellsworthme.org/mdihsociety

The Great Harbor Maritime Museum

Located in the old firehouse, Northeast Harbor

The museum explores and celebrates local maritime history and promotes educational activities on the ocean.

(207)276-5262/ghmm@acadia.net

Islesford Historical Museum

Little Cranberry Island

The museum exhibits explore life in the Town of Cranberry Isles during the 19th century when schooners were the mode of transportation and oceans were the highways. (207)288-3338/www.nps.gov/acad/home.html

Great Cranberry Island Historical Society

Great Cranberry Island

Located in the Longfellow Schoolhouse. Exhibits trace life on Great Cranberry Island from its' earliest inhabitants to the present. Children's activities. (207) 244-9055/www.gcihs.org

Somesville Musuem

Somesville, State Route 102

The original site of the MDI Historical Society, in the heart of the island, overlooks an historic millpond and tranquil Somes Harbor. Exhibits featuring historical topics of MDI communities are installed each summer and include children's activities.

(207) 244-5043/www.ellsworthme.org/mdihsociety

Wendell Gilley Museum

Southwest Harbor

Discover where art and nature meet in Maine. The Gilley Museum's diverse collection of bird carvings, touring art exhibits, and hands-on programs delight visitors of all ages. (207) 244-7555/www.acadia.net/gilley

Frenchboro Historical Society

Long Island

Old tools, furniture, household goods and local memorabilia are on exhibit in the museum. Programs and other special events are offered. Library and craft shop.

(207)334-2932/www.members.aol.com/frboro

Swans Island Lobster and Marine Museum

Swans Island

Ship models, photos, equipment, and stories represent two centuries of Maine commercial fishing and the lobster industry. (207) 526-4423

RESEARCH FACILITIES

Historical and scientific resources are available for research by appointment.

William Otis Sawtelle Collections and Research Center

Collections pertaining to the Cranberry Isles and Acadia National Park

(207) 288-5463/brooke_childrey@nps.gov

Islesford Historical Society

Dedicated to researching and publishing the history of the Cranberry Isles

(207) 244-7893/<http://cranberryisles.com/little/histsoc.html>

Northeast Harbor Library Archives

The official repository for the records of the Town of Mount Desert

(207) 276-3333

Otter Creek Historical Society and Museum, Inc.

Historical information pertaining to Otter Creek

(207) 288-2873

Appendix G

Other Park Areas

Schoodic Peninsula

Isle au Haut

APPENDIX G – OTHER PARK AREAS

Schoodic Peninsula

Acadia National Park protects close to 48,000 acres of coastal Maine including the 2,266 acre granite sliver of Schoodic Peninsula on the eastern side of Frenchman Bay.

Acquired in the 1920s, the park's first superintendent, George B. Dorr, felt that the peninsula captured the essence of the Maine coastline from its rocky shore at Schoodic Point to its outstanding coastal vistas from the top of Schoodic Head. Eventually the peninsula would be shared with the United States Navy. A military radio station based on Otter Cliffs on Mount Desert Island was moved to the Schoodic site in the 1930s.

Today Schoodic Peninsula is the only part of Acadia National Park found on the mainland. Schoodic Peninsula is flanked by Frenchman Bay to the west and to the east. Looking across to Mount Desert Island, numerous islands dot the seascape. Closest are Turtle Island, Ironbound Island; off in the distance to the left are the silhouettes of Baker and Little Cranberry Island. The peninsula boasts granite headlands that bear erosional scars of storm waves and flood tides. Dark colored basaltic dikes intrude between the peninsula's slabs of pink granite. Along this windswept coast, huge granite ledges turn Atlantic waves into lofty geysers while quieter coves hold tidepools and mudflats for exploration. The peninsula is dotted with swamps and marshes scattered throughout the spruce and fir forests. This secluded section of Acadia National Park provides an outstanding backdrop as an outdoor classroom. Lessons on geology and marine creatures spring to life. A recent biological inventory provides educators with information on the plants and animals of the peninsula.

VISITING SCHOODIC PENINSULA

The park boundary is marked by a sign just before you reach Mosquito Harbor Bridge. Beyond the bridge, Frazer Point Picnic Area, with tables, fire rings, comfort stations and drinking water, offers seacoast views of islands, coves, and rocky beaches. Leaving the picnic area, the one-way park road intersects a spruce-fir forest as the road parallels the western shore of Schoodic Peninsula to Schoodic Point. Across Frenchman Bay you can see the Mount Desert Island profile with Cadillac Mountain's summit clearly in view.

About two and one half miles from the picnic area, an unmarked road ascends to the top (440 feet) of Schoodic Head. This is a narrow gravel road, so please exercise caution when meeting traffic. Although you can drive up the one-mile road, you may choose to walk. The quick access trail to the summit from the parking area winds

through spruce forest mingling with stands of jack pine and pitch pine. On a clear day, vistas of the ocean, forest, and mountains claim your attention. Returning to the main road, keep right at the intersection to reach Schoodic Point. (Caution - This becomes a two-way section of road.) Schoodic Point provides an outstanding vantage point for witnessing the power of the sea.

After leaving Schoodic Point, bear right and follow the road - one way again - until you reach Blueberry Hill Parking Area, about one mile beyond Schoodic Point. If you look towards the ocean, Schoodic Island emerges. To your right is Little Moose Island. Behind you and across the road is a steep slope called The Anvil. You can reach the summit of this 180 foot promontory via the trail that starts across the road from the parking lot. The remaining two mile drive from Blueberry Hill to the park's end at Wonsqueak Harbor is skirted by rocky cliffs and cobble beaches. Jack pine is scattered among stands of white spruce along the roadway. Two miles beyond the park is the village of Birch Harbor and the intersection of Route 186.

ENTRANCE FEES

Obtain a park pass while visiting Acadia on Mt. Desert Island before traveling to Schoodic. It is \$20 per vehicle for a seven-day pass.

REST ROOMS

Rest rooms at Schoodic Peninsula are located at Frazer Point Picnic Area and at Schoodic Point. Rest rooms are not open year round.

PICNIC AREAS

Frazer Point is the only picnic area at Schoodic.

CAMPING

There is no camping at Schoodic Peninsula although there are private campgrounds in the vicinity.

APPENDIX G – OTHER PARK AREAS

Isle Au Haut

“High Island” is the English translation for Isle au Haut, the name given by the French explorer, Samuel Champlain, during his expedition along the Maine Coast in 1604. Although shell heaps along the island’s shores tell of an American Indian presence long before Champlain’s arrival, it wasn’t until the end of the American Revolution that farmers, fishermen, and boat builders came to the island in large numbers. In the 1880s, a small summer community, attracted by agreeable weather and idyllic scenery, was established. In 1943, heirs of the founder of that community donated portions of Isle au Haut to the federal government as part of Acadia National Park. Because of their generosity, much of the island’s beauty and solitude is now preserved for all to experience and enjoy. Although about one-half of Isle au Haut is federal park land, the other half is privately owned, with summer residents and a year-round fishing community. Please respect private property rights.

ACCESS

Remote and inaccessible to automobile traffic, Isle au Haut is linked to the mainland by a mailboat from Stonington, which does not operate on postal holidays. No auto ferry exists. For current fare and schedule information, write: Isle au Haut Ferry Company, Stonington, ME 04681, or call between 9AM and 5 PM Monday through Friday, or 9AM and 12 noon on Saturday, at (207) 367-5193. Important: Year-round, the mailboat runs to the Town Landing. From mid-June through early September (not on Sundays), the boat also goes to Duck Harbor. Park rangers encourage visitors to ride to Duck Harbor, which is located in the heart of the park area. The mailboat operates on a first-come, first-served basis. Since there is a limit on the number of visitors allowed in the Isle au Haut section of Acadia, day trippers may, on rare occasion, be denied access to the park.

HIKING

For avid hikers, there are 18 miles of trails that offer opportunities to explore rocky shoreline, wooded uplands, marshes, bogs, and a mile-long freshwater lake. Come prepared for rough and sometimes wet trails. Bring adequate footgear, warm clothing, and raingear. From late June through early September, boat service to Duck Harbor will provide the best starting point for hiking. During the summer, a park ranger will board the mailboat at the town landing to answer your questions about Isle au Haut. Upon arriving at Duck Harbor, you may elect to take a hike with the park ranger or explore on your own.

BIKING

Park rangers discourage biking on Isle au Haut for the following reasons: Only four miles of road are paved and appropriate for narrow-tired touring bikes. The rest of the road is very rough and suitable only for non-motorized mountain bikes. Mountain bikes cannot be used on hiking trails. The mailboat will only drop off and pick up bikes at the Town Landing.

CAMPING

Five lean-to shelters at Duck Harbor Campground can be used on an advance-reservation basis from May 15 through October 15. (See reservation information below). The shelters have three sides, a roof, and floor, and hold up to six people each. Shelter dimensions are 8 feet tall at the center, 8 feet deep, and 12.5 feet wide. A small free-standing tent may only be erected inside the lean-to. Facilities include a fire ring, a picnic table, a pit toilet, and a hand pump for water. The pump is located about 1,600 feet from the shelters, so bring a container to carry water. Dead and down wood may be gathered for campfires. There is no trash disposal. All trash must be carried out. Pets are not permitted in the campground. Check-out time is 11 am. From late June through early September, boat service to Duck Harbor brings you within a quarter mile of the campground. When the boat does not run to Duck Harbor, it will leave you at the Town Landing, and you must backpack five miles to Duck Harbor Campground. Confirm boat schedule and destination with the captain.

RESERVATION INFORMATION

Follow these instructions to apply for a Special Use Permit at Duck Harbor Campground:

- Reservation requests for a Special Use Permit must be received in person at park headquarters or must be postmarked April 1 or later. Requests delivered or postmarked before April 1 will be returned without action. Telephone requests are not accepted. There is a limit of one stay per season, per person or group. Requests should be sent to Acadia National Park, PO Box 177, Bar Harbor, ME 04609, attention: Isle au Haut Reservations.
- Before completing the Reservation Request Form, contact the Isle au Haut Ferry Company, Stonington, ME 04681 or call (207)367-5193 for the boat schedule to Isle au Haut. Print name, address, daytime and evening telephone number, and number of people in the space provided on the request form. Enter your choice of dates in the block provided. Due to high demand for campsites, you are more likely to receive a reservation confirmation if you apply for alternate dates. Indicate if you will accept less than the number of days requested. "Departure date" indicates the day you actually leave the campground. Remember that you cannot arrive or depart from Isle au Haut on postal holidays because the mailboat does not operate on these days.

- Regardless of how many nights you wish to camp, \$25.00 must accompany each Reservation Request Form. One request form reserves one lean-to. If your group includes more than six people, you will need more than one Reservation Request Form. Only one request form and one fee accepted per envelope. The maximum length of stay is three nights per group, except before June 15 and after September 15, when the maximum stay is extended to five nights. Postal money order, certified check, or personal check payable to the National Park Service is acceptable. Do not send Canadian currency. If we can accommodate your reservation request, your \$25.00 Special Use Permit fee becomes non-refundable and we will send a reservation confirmation to you. There is no additional fee for camping. If we are not able to honor your reservation request, we will return your \$25.00.
- When you travel to Isle au Haut, bring your Special Use Permit along; you will need to show it to the mailboat captain and the park ranger when you arrive.

SERVICES

A small store and post office, both with limited hours, are located near the Town Landing. There are no private campgrounds.

REGULATIONS

Accidents: Must be reported to the park rangers if property damage or personal injury are involved.

Hunting: Hunting and trapping are prohibited.

Firearms: Must be unloaded and cased or otherwise packed in such a way as to prevent use.

Fishing: Permitted in accordance with State of Maine law. A state license is required for freshwater fishing.

Audio Devices: The operation of any audio device which unreasonably annoys other park visitors is prohibited. Radios must be completely off between quiet hours, 10pm and 7am.

Firecrackers: The possession or use of fireworks or firecrackers is prohibited.

Disorderly Conduct/Intoxication: It is illegal to be in the park when under the influence of alcohol and/or a controlled substance. The possession of alcoholic beverages by a minor (less than 21 years old) is prohibited.

Public Property: The possession, destruction, removal, or disturbance of park property or natural resources is prohibited.

Fire Danger: Campfires are allowed only in designated campground areas. Never leave fires unattended. During periods of high fire danger, campfires in the campground and smoking on trails may be prohibited.

Pets: Must be on a leash at all times while in the park and are prohibited in the campground.

APPENDIX H

Interpretive Trail Guides

Sieur de Monts Spring Trail Guide

Jordan Pond Nature Trail

The Carroll Homestead—Self-Guiding Trail

APPENDIX H – INTERPRETIVE TRAIL GUIDES

Sieur de Monts Spring Trail Guide

The following is only the text for the trail guide. There are no numbered posts. It is provided to give guides an idea of what is available to their groups. To purchase the actual trail guide, check at park information centers.

WELCOME TO SIEUR DE MONTS SPRING

Nature shaped the valley. Glaciers carved it out, leaving Dorr Mountain and Huguenot Head to tower above. A fire swept through here in 1947, forcing the spruce-fir forest to surrender to maples, birches, and aspens. Wetlands at both ends of the valley—the Tarn to the south and Great Meadow to the north—replenish or dry, at the mercy of snowmelt, rain, and beaver dams.

People shaped this valley. The human presence can be traced back to American Indians, early European settlers, and those who came to enjoy the natural beauty of Mount Desert Island. Sieur de Monts Spring chronicles not only natural events of the long distant past, but the story of people who strove to preserve it as part of a great national park.

Follow the paved path to the wooden bridge.

EXPLORERS, SETTLERS, AND FOUNDERS

When the French explorer, Sieur de Monts, sailed along these shores in 1604, this spring area lay in the shadows of the unknown, untouched and unseen by Europeans. The spring was probably known to American Indians who visited it while passing through the gorge between Huguenot Head and Dorr Mountain, on their way to Otter Creek.

Sieur de Monts' navigator, Samuel Champlain, charted the coast, including this island, which he named l'Isle des Monts Desert—Island of Barren Mountains. The island, with its prominent headlands and peaks, became an unmistakable landmark for mariners, and part of the prize in the war between the French and British.

George B. Dorr, a park founder and its first superintendent (1916-1944), was fascinated by the island's French history. When he acquired the land around this spring, he named it in honor of the man who sought to open the New World to French settlement and establish "New France" in North America.

From the bridge, follow the gravel path to the domed spring house.

SWEET WATERS OF ACADIA

The British battled the French for dominance in the New World, and won. By the American Revolutionary War, Maine was still sparsely settled. Islanders subsisted on what they could harvest from sandy, rocky soil and the sea. Land once known only to American Indians was divided into homesteads and its forests harvested.

The land around the spring was once farm land. In the early 1900s, two enterprising islanders planned to open a commercial spring water business here. Their scheme failed and George B. Dorr purchased the spring in 1909.

Dorr placed the Florentine-style canopy over the spring “with openings upon the sides protected to a man’s height and over with plates of purest glass, so that all who wished might look in.” He carved Sweet Waters of Acadia on a boulder “in memory of two spring fountains I had once visited...built by the Greeks{sic} and named “The Sweet Waters of Europe and The Sweet Waters of Asia.”

To the right of the spring and boulder is a wooden post that marks the Dorr Mountain trails. Walk over to it.

STONE STEPS TO THE SUMMIT

Early settlers and visitors recorded following “Indian paths” on many parts of the island. Islanders added to this network as needed. By the late 1800s and early 1900s, visitors and summer residents, like George B. Dorr, great walkers all, desired trails that went beyond mere utility.

Village Improvement Societies oversaw the construction of new trails that blended harmoniously with the landscape and delivered the hiker to beautiful scenery. Often times, trail builders used granite found along trail routes to build unobtrusive but solid trails.

Stone stepped trails characterize the pathways to Dorr Mountain’s summit. Trails with stairways, builders believed, allowed hikers of every ability to enjoy steep, or otherwise impassible mountainsides.

Follow the Dorr Mountain Trail a short way to a second trail sign. It is not very far and involves only a couple of stone steps. If you prefer, remain where you are.

MEMORIAL PATHS

This is the East Face Trail, originally called the Emery Path. Sponsors were sought to fund trail construction. Sponsors could name a trail in memory of the person of

their choice. Such trails were known as memorial paths. Mrs. John Anson, a summer resident, commissioned this trail in memory of her late husband, John Emery.

This mountain was once called Dry Mountain. George B. Dorr changed it to Flying Squadron Mountain in honor of World War I French flyers. It was again renamed following George B. Dorr's death, honoring him for his efforts to create Acadia National Park. It is a fitting tribute to the man who directed much of the trail work on this mountain, and donated the land comprising Sieur de Monts Spring to the National Park Service.

You may follow the Jesup Path to the left. The walk is easy. When you rejoin the paved path, bear right and follow it to The Robert Abbe Museum. If you did not follow the trail to the intersection, follow the paved path up to the museum.

THE ROBERT ABBE MUSUEM: ONE MAN'S INSPIRATION

Robert Abbe was a New York surgeon who helped pioneer the use of radium. In 1922 he discovered a new pastime as an amateur archeologist. In Bar Harbor, a window display of ancient stone tools drew him inside for a closer look. The tools and their history fired his imagination. The Right Reverend William Lawrence wrote of that moment: "These very stones that he was handling had been in the hands of men who lived and fished along these shores, climbed these mountains, and brought up families before history began. These stones were their tools..."

Dr. Abbe's purchase of this collection led to others and laid the foundation for Maine's first archeological museum exhibiting artifacts of pre-historic and historic American Indian cultures.

He raised funds to build a museum at Sieur de Monts Spring which he intended to be a small trailside museum. Dr. Abbe wrote: "My aim has been to create a permanent 'one show' historic incident in the path of the 'Madding Crowd' and to make it as perfect as possible."

Dr. Abbe never saw the completion of his museum. He died in 1928, five months before it opened. However, his legacy has led to professional archeological research in coastal Maine that continues today, and to exhibits that help us understand those whose footsteps we follow.

Enjoy the Abbe Musuem (a small fee is charged) or follow the paved path back down toward the spring. A short trail branches to the right to a stream and small pool of water. Follow the stepping stones down to the water.

A CHANGING SCENE

Sieur de Monts Spring little resembles what American Indians knew prior to European settlement. George B. Dorr described how he landscaped Sieur de Monts Spring in 1909: “Freeing it from a concealing cover of sphagnum moss and fallen leaves...I shaped the sloping ground about it into a shell-like concave basin, deeply draining it...”

He piped the flow of water to this artificial pool, allowing people access to the water. The water does not possess any special mineral properties and is not recommended for drinking.

Styles of landscaping and attitudes toward natural areas change through the years. George B. Dorr’s design of Sieur de Monts Spring reflected a different era and different ideas about “nature parks.” Because of Dorr’s contributions to Acadia National Park, Sieur de Monts Spring is preserved as an area of cultural significance within a natural area.

Retrace your steps to the main path. Cross the first bridge on your right, bear left, then right to the Nature Center. To the right, framed by shrubbery, is a monument to George B. Dorr.

A GIFT FOR ALL TIME

George B. Dorr devoted much of his adult life and family fortune to preserving portions of Mount Desert Island and to establishing and promoting Acadia National Park. He helped form the Hancock County Trustees of Public Reservations in 1901 “to acquire by devise, gift, or purchase...for public use lands in Hancock County, Maine...” In 1916, on behalf of the Trustees, he presented 5000 acres of land to the National Park Service and the nation. Since 1916, more donations and some purchases have expanded the park to well over 35,000 acres.

Sieur de Monts Spring was described by George B. Dorr as “one of the foundations on which the future park was built.” His gift of ten acres around this stone represents the gifts of hundreds of public-spirited people who have given land and resources to help create Acadia National Park.

Today, the tradition of stewardship is continued by volunteers, preservation groups, and all those who try to leave the park in better condition than when they arrived. This is George B. Dorr’s legacy for all time.

APPENDIX H – INTERPRETIVE TRAIL GUIDES

Jordan Pond Nature Trail

This text-only copy is provided to give guides an idea of what is available to their groups on this trail. To purchase the actual trail guide, check at park information centers.

STOP ONE

Very few plants grow on the forest floor here. Evergreen trees, like balsam fir and red spruce, often create forests of deep shade that prevent most other plants from getting enough light to live. And evergreens' slow-decaying leaves make the soil too acidic for most plants to grow. By limiting the invasion of other plants, these trees reduce competition for light, water, and nutrients.

As dense stands of young trees mature, some will dominate and grow taller. The rest will die, leaving a more open, but still shady forest floor. Look for a forest like this as you walk farther along the trail. Early settlers found Maine's forests a rich bounty, providing wood for homes, ships, barrels, fuel, and markets.

STOP TWO

What differences do you see between the last stop and here? Like most broad-leaved trees, American beeches admit more light than evergreens, allowing more plants to grow beneath them. As you visit other areas in Acadia where broad-leaved trees are common, compare the number of understory plants to the ones in predominantly evergreen forests.

The first European settlers in eastern North America learned that American beech trees would often be numerous where soils were rich. They looked for stands of beeches as signs of productive places to farm. Another common tree along this trail is the northern white cedar. Look for its distinctive streaked and slightly shaggy bark and tiny flattened leaves as you walk to post #3.

STOP THREE

From post #3, go down the trail to a stone walk 25 yards to the right. Can you imagine that this wetland was once an arm of Jordan Pond? Over time, silt and decaying water plants have filled in from both banks, creating enough soil for land plants to invade. This process often occurs in small shallow bodies of water. The rock path, originally built in the early part of the century and rebuilt in 1983, may have lessened lake waves and speeded up the process. Can you see any evidence that a forest may one day stand on this site?

A number of other much larger wetlands, like Bass Harbor Marsh and Pretty Marsh, occur in the lowlands of Mt. Desert Island. Early settlers grazed livestock there, and cut the grasses for hay.

Turn around and retrace your steps to post #3, then walk straight ahead with the pond on your right.

STOP FOUR

This was a cedar tree like the ones you identified before. The elongated holes were made by huge (17 inches long) pileated woodpeckers foraging for insect larvae that live in and eat the wood. Other organisms that feed on dead trees include bacteria and fungi. Enzymes that these decomposers produce digest and soften the wood, contributing to the natural recycling all living things eventually undergo. Can you find other trees in more advanced stages of decay along the trail?

Living cedar trees produce resins and tannic acids that discourage invasion by insects and fungus. These same chemicals slow the rotting process in dead cedars. Area residents have used long-lasting cedar wood for many purposes, including furniture, fences, shingles, and carriage road junction signs.

STOP FIVE

The rounded hills at the far end of the lake are called the Bubbles. Notice that the forests to the right of the Bubbles are a lighter shade of green than other forests on nearby slopes. The lighter greens are a forest of hardwood trees. After a fire in 1947, beeches, birches, and other hardwoods colonized burned-over slopes. Such quick regrowth by hardwoods is common after major disturbances. However, evergreens will likely reclaim some of the slopes over time. Look for hardwood forests as signs of areas burned by the 1947 fire as you travel around the east side of the island.

A previous fire, in 1864, destroyed most of the nearby forests, and ended a logging operation run by the Jordan brother, for whom the lake is named.

STOP SIX

Granite forms the mountains of Acadia, the boulders in the water, and the bedrock beneath your feet. Small crystals of different types of minerals—quartz, hornblende, feldspar—compose the 375 million-year-old rocks, giving them a mottled look. They formed as molten rock called magma cooled slowly, thousands of feet below the earth's surface. Erosion by rain, wind, and glaciers in the intervening eons have removed the overlying materials and shaped Acadia's landscape.

The dramatic coastal mountain scenery that resulted began attracting artists in the 1840s. Their paintings sparked an interest in the island that culminated in the creation of Acadia National Park. During the 19th and 20th centuries, workers quarried from Mt. Desert Island and nearby islands millions of tons of granite destined for use in buildings and bridges all over the northeastern United States.

STOP SEVEN

The rock wall in the woods is the foundation of an old pump house. Lake water was pumped up to a garden where the upper parking lot now lies. Vegetables from the garden were used at the original Jordan Pond House Restaurant, which served artists, hikers, and carriage users for almost a century.

Long before anyone thought of Acadia as a place for recreation, humans were exploiting the island's economic resources. People of European descent began settling here in 1761. They timbered the mountains, farmed and grazed stock on the meadows and wetlands, built boats in the many coves and harbors, and harvested what at the time seemed to be inexhaustible stocks of fish and lobsters in nearby waters. Eventually the restaurant became a market for their catch.

Ahead you will come to the Jordan Pond Boat Launch. To find post #8, walk directly across the boat launch, keeping the pond on your right.

STOP EIGHT

This exhibit panel tells how glaciers changed the landscape of Acadia. The huge granite boulder in the water to the left of the panel is an "erratic," carried here in ice at the bottom of a glacier from a place dozens of miles away. Thousands of erratics dotting Acadia and all of New England are dramatic evidence of the glaciers' extent and power.

At the fork in the trail ahead, go left to post #9.

STOP NINE

In the 1880s, the Tippetts family took over the old Jordan brothers farmhouse and offered "a good rural lunch at a good rural price." A tradition of afternoon tea and popovers on the lawn began around 1900. Over the decades the farmhouse was expanded to serve growing numbers of people who come to the island to recreate and relax. The present Jordan Pond House was built in 1982 to replace the original, which burned in 1979.

From among the early visitors came the individuals who envisioned and brought the park into being. In 1901, long-time summer residents began working to conserve the forests and vistas they loved. Encouraged by Charles Eliot, president of Harvard University, George Dorr devoted forty-three years of his life, energy, and family fortune to the creation and development of Acadia National Park.

From here the trail turns left 25 yards to post #10. If you plan to visit the Jordan Pond House, please walk first to post #10 and return this booklet.

STOP TEN

The oil-permeated bark of the paper birch tree is waterproof. American Indians made use of this quality for centuries, lining canoes, shelters, and containers with strips or swaths of the tough but flexible material. (Compare the curly, gold-tinged bark of the yellow birch across the trail.) Indian populations were small, and their exploitation of natural resources could be easily absorbed by their environment.

Today, millions of visitors come to Acadia each year, putting pressure on the park's resources. We must all try to minimize our impact. If, for example, many people were to peel bark from the birches, the trees would lose their protection from insect and fungus attack. Please take care during your visit not to damage or disturb any of Acadia's plants and animals. Working together, we can ensure that this park remains beautiful and interesting for generations of visitors to come.

APPENDIX H – INTERPRETIVE TRAIL GUIDES

The Carroll Homestead—Self-Guiding Trail

There are no numbered posts. The beginning of the trail starts at the bus drop-off, traveling a short distance through the woods. Where the trail enters the homestead, at the old barn site, wander around the homestead by walking around the front of the house and out toward the open ledges, then walk around the back of the house. This trail guide is provided to give guides an idea of what is available to their groups at this park site. To purchase the actual trail guide, check at park information centers.

The Carroll Homestead gives us a glimpse into the past and the rich heritage of coastal Maine. The generations of Carrolls who have lived at the “Mountain House” reflect the industrious lifestyle typical to this region. Interdependence, not isolation, dictated their daily lives. Decades later, coastal Mainers still maintain a strong connection to the land and the sea, a dedication to hard work, and a commitment to family.

WELCOME

Welcome to the Carroll Homestead. The Carroll family lived in their “Mountain House” from 1825 to 1917. Their homestead depicts a way of life that was representative of coastal Maine during this time.

1825-1870

John and Rachel: 1 son, 5 daughters

1870-1900

Jacob and Rebecca: 2 sons, 8 daughters

1900-1917

John and Viola: 4 sons, 2 daughters

Coastal homesteads were modest, living conditions were often crowded, and the work abundant. Many families supported themselves through farming, fishing and ship building. Although most people were self-employed, they maintained a close relationship with the community for their social, spiritual, and economic well being. The Carroll family raised food, fiber, and fuel to support the household, but produced little that was taken to market. Ties to the family and the land were strong and accounted for much of their perseverance.

TIMBER AND ROCK MOUNDS

(on trail through woods)

Clearing the land of trees and rocks was back-breaking, essential work to provide an area for fields, pastures and a house site. The forest provided an abundance of timber needed for construction, cooking, and heating.

The Carrolls often cut trees during the winter when logs were easily hauled on sleds over frozen roads and when more help was available. "Winter is upon us and finds the seafaring population at home; the chief occupation at present is getting the year's supply of firewood." (Mount Desert Herald 1884)

Rock mounds are abundant throughout the Carroll homestead. Some of the rocks were used for foundations or stone walls like the one that leads to the barn site.

LIVESTOCK

(at old barn site)

The quantity and variety of livestock varied depending on the family's needs. The Carroll family always kept cows. Oxen were used in the early years to clear the land. Sheep were kept for the first 67 years and provided wool for clothing. Chickens and horses were also kept at various times. Hay was harvested in several fields and around the house site and stored in the one-story barn that once stood on the property.

HOME AND HEARTH

(in front of house)

The kitchen was the largest room in the house and the center of family life. "Most families had their "fire kettle" to bring coals from the neighbor's hearth in case their own fire went out. In many homes, fire on the hearth, carefully covered at night, was kept alive for years and to frequently be obliged to "borrow fire" was held to be a sign of shiftlessness on the part of the household." (Nellie Thornton:1933)

Surely many a story was told around the warmth of a fireplace or stove on cold winter nights. The number of year-round residents in the Carroll house ranged between three and 12, with an average of six people over the 92 years. The house was enlarged in 1850. Can you locate the 15 foot addition that more than doubled the size of the house?

OFF-FARM EMPLOYMENT

(by old apple tree)

Off-farm work often supplemented the income of coastal farmers, and provided money to purchase items that could not be produced on the farm. Goods or labor were also common forms of payment for services.

Masonry was a mainstay of the Carroll family economy. Four of the Carroll men were masons. The men were often gone for a week or more as they worked on fine homes in Northeast Harbor or other parts of the island. John (II) Carroll received many apple tree grafts from people for whom he had done masonry work. A number of apple trees still remain on the property.

Teaching was a common occupation for women. Teachers were required to move often so students could be exposed to different ideas. Teachers rarely owned property or homes and often stayed with relatives before moving on to their next assignment.

Eight of the Carroll women earned a living as teachers. Mary Ann Carroll, daughter of John (I), taught school until she was almost 70 and often returned to the mountain house between terms.

THE LURE OF THE SEA

(by ledges looking toward ocean)

To the south lies Southwest Harbor and the Atlantic Ocean. The harbor was a beehive of activity where vessels unloaded their cargo and left with their holds full of granite, ice, fish, and cobblestones from Mount Desert Island.

In spite of the close proximity to the ocean, only one of the Carrolls was drawn to the sea. At the age of 16, Jacob Carroll began his seafaring career which took him across the Atlantic five times and around the world once.

A GARDEN AT THE DOORSTEP

(behind house)

Small gardens called “kitchen gardens” supplied many families with pole beans, radishes, carrots, lettuce, cucumbers, and herbs. Kitchen gardens were often located a stone’s throw from the house.

The Carroll family kitchen garden ran the length of the house. The men were responsible for initial plowing and planting, while the women and children attended to weeding and daily care. A blueberry patch was located across from the present day gravel road. The children occasionally earned extra “pin money” by selling some of the vegetables and blueberries to nearby summer cottage residents.

FAMILY LIFE

(behind house)

Coastal families were often large. Everyone was expected to contribute to the running of the farm and household. The younger children gathered eggs, or pulled

weeds in the garden, while the older children tended to the livestock, chopped firewood or helped with the planting and the harvesting.

The Carroll children also had time to enjoy fishing, playing games and exploring “Dog Mountain”, (St. Sauveur), located directly behind the house. Although school was not required by law, many children were taught at home or attended school when their help was not needed at home. The Carrolls knew the value of reading and writing and saw to it that their children attended school.

The church was a source of both spiritual and social activity, bringing neighbors together to share their joys and sorrows. The Carrolls rowed across the harbor to attend church in Manset until the late 1840s when church services were held within walking distance in Southwest Harbor.

WINDS OF CHANGE

(northwest corner of property by large oak)

By the early 1900s, modern conveniences such as electricity, telephones and indoor plumbing in the towns drew many Maine families off their homesteads. Better paying jobs were also available in town.

The Carroll family moved to Southwest Harbor in 1917, probably because of the convenience of nearby schools and services. By this time John’s (II) masonry business was also well established in town.

The Carroll Homestead remained in family ownership after their move to Southwest Harbor. The family continued to harvest hay and timber from the property and to gather here for special occasions. In 1925 the family celebrated the 100th anniversary of John and Rachel’s first Thanksgiving dinner in the house, complete with goose and plum pudding! From 1934 to 1953 the house was leased to summer residents. In 1982 the Carroll homestead, comprising 40.5 acres, was transferred to Acadia National Park.

APPENDIX I

Accessibility Guide to Acadia National Park

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Park Campgrounds

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APPENDIX I – ACCESSIBILITY GUIDE TO ACADIA NATIONAL PARK

Information Centers & Museums

Thompson Island Information Center

Entrance: Good

Parking: Good

Rest Rooms: OK

Pay Phones: Good

Water Fountain: OK

Special Notes: Open Seasonally. Park and Chamber information.

Hulls Cove Visitor Center & Eastern National Bookstore

Entrance: OK

Parking: Good

Rest Rooms: Good

Pay Phones: Good

Water Fountain: OK

Special Notes: Follow signs which lead to accessible parking lot. Elevator to second floor. Cups available for water fountain. Open Mid-April-October.

Sieur de Monts Nature Center

Entrance: X

Parking: Good

Rest Rooms: OK

Pay Phones: Good

Water Fountain: X

Special Notes: Ramp at back door. Open June-September.

Park Headquarters

Entrance: Good

Parking: Good

Rest Rooms: OK

Pay Phones: Good

Water Fountain: OK

Special Notes: Open Mid-April to Oct. M-F 8am-4:30pm; Nov. to Mid-April, Daily 8am-4:30pm.

Islesford Historical Museum (On Little Cranberry Island)

Entrance: X

Parking: X

Rest Rooms: OK

Pay Phones: X

Water Fountain: X

Special Notes: Access by boat. Restrooms in nearby building.

Park Campgrounds

Blackwoods

Overall Rating: Good

Ranger Station: Good

Rest Rooms: OK

Pay Phones: Good

Fire Grills: Good

Picnic Tables: Good

Amphitheater: Good

There are 5 designated accessible campsites with paved walkways leading to fire grill, picnic table, water, restrooms and amphitheater. Register for campsite from your car window. (Reservations required May 1–October 31.) Call 1-800-365-2267 or register on-line: <http://reservations.nps.gov/>.

Seawall

Overall Rating: Good

Ranger Station: X

Rest Rooms: OK

Pay Phones: Good

Fire Grills: Good

Picnic Tables: Good

Amphitheater: Good

Campsite A-27 and nearby restroom are accessible. Long paved walkway leads to amphitheater. All new restrooms are accessible.

Museums on Mount Desert Island

(privately operated—most seasonal)

Abbe Museum (Sieur de Monts)

Main Entrance: ?

Parking: OK

Rest Rooms: Good

Pay Phones: OK

Water Fountain: none

Special Notes: Assistance may be needed for ascending steep paved trail to museum.

Abbe Museum (Bar Harbor)

Main Entrance: Good

Parking: Good

Rest Rooms: Good

Pay Phones: Good

Water Fountain: Good

Special Notes: Parking and access in rear.

George B. Dorr Natural History Museum (College of the Atlantic-Bar Harbor)

Main Entrance: OK

Parking: Good

Rest Rooms: Good

Pay Phones: Good

Water Fountain: Good

Special Notes: Grade from parking area may require assistance

Great Harbor Museum (Northeast Harbor)

Main Entrance: OK

Parking: Good

Rest Rooms: OK

Pay Phones: Good

Water Fountain: none

Special Notes: Only bottom floor is accessible.

Mt. Desert Oceanarium (Southwest Harbor)

Main Entrance: OK

Parking: OK

Rest Rooms: X

Pay Phones: X

Water Fountain: X

Special Notes: One inch curb at entrance. Numerous hands-on exhibits. Phone available.

Wendell Gilley Museum (Southwest Harbor)

Main Entrance: OK

Parking: OK

Rest Rooms: OK

Pay Phones: none

Water Fountain: Good

Special Notes: Ramp to side entrance - may need assistance. Phone available.

Sound School House Museum (Mount Desert)

Main Entrance: Good

Parking: Good

Rest Rooms: Good

Pay Phones: none

Water Fountain: none

Special Notes: none

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Picnic Areas

Bear Brook

Overall Rating: Good

Parking: Good

Rest Rooms: Good

Water Fountain: Good

Fire Grill: Good

Picnic Table: Good

Special Notes: Some level sites.

Fabbri

Overall Rating: Good

Parking: Good

Rest Rooms: Good

Water Fountain: Good

Fire Grill: Good

Picnic Table: Good

Special Notes: Paved walkway leads to accessible site.

Frazer Point (Schoodic)

Overall Rating: Good

Parking: Good

Rest Rooms: Good

Water Fountain: Good

Fire Grill: Good

Picnic Table: Good

Special Notes: Several level grassy sites.

Pretty Marsh

Overall Rating: OK

Parking: Good

Rest Rooms: Good

Water Fountain: Good

Fire Grill: Good

Picnic Table: Good

Special Notes: Rough terrain.

Seawall

Overall Rating: OK

Parking: Good

Rest Rooms: OK

Water Fountain: none

Fire Grill: Good

Picnic Table: Good

Special Notes: One designated accessible site, others on uneven terrain.

Thompson Island

Overall Rating: OK

Parking: Good

Rest Rooms: Good

Water Fountain: Good

Fire Grill: Good

Picnic Table: Good

Special Notes: Views of Thomas Bay. Assistance may be needed to shore.

APPENDIX I – ACCESSIBILITY GUIDE TO ACADIA NATIONAL PARK

Beaches

Echo Lake

Overall Rating: ?

Parking: Good

Rest Rooms: X

Water Fountain: X

Pay Phones: OK

Changing Rooms: X

Special Notes: Steep road to beach begins at the “No Parking Any Time” sign.

Sand Beach

Overall Rating: X

Parking: Good

Rest Rooms: X

Water Fountain: X

Pay Phones: Good

Changing Rooms: X

Special Notes: 31 steps make the beach inaccessible.

Ike’s Point

Overall Rating: OK

Parking: OK

Rest Rooms: none

Water Fountain: none

Pay Phones: none

Changing Rooms: none

Special Notes: Small boat launch area.

Shops and Restaurants

(concession operated)

shops

Cadillac Mountain

Main Entrance: Good

Parking: Good

Rest Rooms: Good

Pay Phones: none

Special Notes:

Jordan Pond

Main Entrance: Good

Parking: Good

Rest Rooms: X

Pay Phones: X

Special Notes: Elevator to second floor.

Thunder Hole

Main Entrance: X

Parking: Good

Rest Rooms: Good

Pay Phones: none

Special Notes: Chemical toilet.

Restaurants

Jordan Pond House

Main Entrance: Good

Parking: Good

Rest Rooms: OK

Pay Phones: Good

Special Notes: Open seasonally.

Ranger-led Programs

Ranger-led activities are offered mid-May to mid-October. Accessible programs are listed in the park newspaper, *The Beaver Log*, available at any park information station. Also available at www.nps.gov/, or check with the park staff regarding details of specific programs.

Hulls Cove Visitor Center Orientation Video

The park orientation program is captioned. Cassette receivers with descriptive narrative, French, or German translation are available at the information desk.

Auto Tape Tour

A self-guided tape tour of the Park Loop Road, Cadillac Summit and Somes Sound may be rented or purchased at the Visitor Center. Tape players may also be rented. Also available on CD for use on car CD player.

A certified sign language interpreter may be available for some interpretive programs with a two week advanced notice. Service is dependent on availability of funds and interpreters. Phone (207) 288-8800 (TTY) or (207) 288-3338 (voice) for information.

APPENDIX I – ACCESSIBILITY GUIDE TO ACADIA NATIONAL PARK

Trails

Sieur de Monts Spring Area

Accessible parking is located near the Nature Center.

Wild Gardens of Acadia

Garden paths are a packed gravel-surfaced. Assistance may be helpful.

Hemlock Road

On the right as you enter the parking lot is a hard, gravel-surfaced abandoned road. Trail meanders through woodlands at the base of Dorr Mountain. (1.5 miles round trip). For the adventurous and hardy.

Wonderland Trail

Park in the Wonderland Parking lot, west of Seawall Campground on Route 102-A. Following an abandoned road, the trail has both level and hilly sections. It is generally hard-packed with some loose and rocky sections. In a mile, the trail leaves the woods and opens onto the shoreline at the tip of the Wonderland Peninsula. Assistance will be necessary in several places, but the view is worth the effort.

Ship Harbor Trail

Park in the Ship Harbor Parking lot, west of Seawall Campground on Route 102-A. First quarter mile of the trail is a hard packed surface leading to the mudflats. Access to intertidal pools is over rocky, uneven terrain.

Man of War Brook Fire Road

Park in the small unmarked gravel parking area on the east side of Route 102, one-eighth mile north of the larger paved Acadia Mountain parking area. Follow the abandoned road through a quiet, mixed growth woodland. The road is about one mile long. Beware of uphill and downhill grades, washouts, and exposed culverts. Assistance may be necessary

Carroll Homestead—Self-Guided Trail

Located on Rt. 102, one mile north of Southwest Harbor, this half mile self-guided trail leads around the grounds of the Carroll Homestead. The path is hard-packed but root-covered and uneven. Assistance may be necessary on path and grassy field near house. Accessible parking is available at end of the road adjacent to house. The self-guiding trail pamphlet is available on site or at the Visitor Center.

Carriage Roads

Generally, the carriage road system offers the best access to many remote and scenic areas. The two easiest are listed below. Others tend to be steeper. Extended use of the carriage roads depends on your ability and endurance.

Eagle Lake

Park at the Eagle Lake Parking lot on the north side of Route 233. North, the carriage roads lead towards Breakneck Ponds, Half Moon Pond, and Witch Hole Pond (round trip-5.3 miles). South, under the stone bridge, the carriage roads lead in two directions around Eagle Lake (round trip-6 miles). When following the carriage roads, be aware of washouts, steep grades, and bicycle traffic. Assistance may be helpful. Accessible parking and chemical toilets.

Bubble Pond

From the parking area, follow the level trail to the north end of Bubble Pond. From here you have access to the carriage roads, one of which borders the pond. Accessible parking and chemical toilets.

APPENDIX I – ACCESSIBILITY GUIDE TO ACADIA NATIONAL PARK

Boat Cruises

(privately operated)

Cruises focus on the natural and cultural history of Acadia National Park and the islands off the coast of Mount Desert Island. Trips vary in length from two to five hours. Most operate May through mid-October. Cruise prices vary. Boarding is easiest at high tide when ramp-way slopes are less steep. Contact the boat operators ahead of time to make arrangements for assistance. One can remain in wheelchair on the lower deck of boats.

Islesford Historical Cruise

Visit the Islesford Historical Museum which is part of Acadia National Park. The boat cruise is accessible. Disembarking on Little Cranberry Island would be difficult. Meet at Northeast Harbor Town Dock, (207) 276-5352.

Other Information

Isle au Haut Ferry

Strips of wood running perpendicular to the ramp make it extremely difficult to unload at Isle au Haut Town Landing. There are no accessible campsites on Isle au Haut.

Wildwood Stables

There are two wheelchair accessible horse-drawn carriages each of which accommodates two passengers using wheelchairs and several additional passengers. Ramp to office. Accessible parking and restrooms.

Intertidal Zone

The best access to an intertidal zone is on the gravel bar between Bar Island and Bar Harbor at low tide. Automobiles may be driven onto the gravel bar. Access is via a rocky and uneven ramp on Bridge Street in Bar Harbor.

Thunder Hole

Accessible parking in right hand lane of road or in the upper parking lot near restrooms or gift shop. Ramped walkway leads to a viewing area of Thunder Hole.

Golden Access Passport

Free to US citizens with disabilities. Provides entrance and half-price camping at most national parks, monuments, and federal recreation areas. You must have the passport before making camping reservations in order to receive the discount. Passports are available at the Park Headquarters, Hulls Cove Visitor Center, the Village Green, Entrance Station, and Blackwoods and Seawall campgrounds in Acadia or at any National Park, National Forest, Bureau of Land Management, Fish and Wildlife Service, U.S. Army Corps of Engineers, and Bureau of Reclamation areas.

Public Transportation on Mount Desert Island

The Island Explorer free shuttle bus links Acadia National Park and neighboring village centers. There are two wheelchair spaces on each bus. Schedules are available at information centers or on the Island Explorer web site

Emergency Phone Numbers

Park Rangers

Personal Injury or Property Damage (207) 288-3338 or 207-288-8800 (TTY)

Outside the Park

All of Mount Desert Island: 911

Bar Harbor Police: 288-3391

Southwest Harbor Police: 244-5552

Mount Desert Police: 276-5111 (TTY)

Mid-April through October 31, Monday-Friday, 8:00am-4:30pm; November to mid-April, daily, 8am-4:30pm. (207) 288-3338 (voice)/(207) 288-8800 (TTY)

Acadia National Park is continually working to improve access for all visitors. If you have any comments or suggestions concerning access during your visit, please write:

Acadia National Park

P.O. Box 177

Bar Harbor, Maine 04609

A

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